OLD-AGE POVERTY IN INDONESIA:

Empirical Evidence and Policy Options

A Role for Social Pensions

JAN PRIEBE AND FIONA HOWELL

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Acknowledgements

TNP2K's mission is to coordinate poverty alleviation policies in Indonesia. As part of its tasks, TNP2K conducts and commissions research reports and studies with the objective of facilitating and informing evidence-based policy planning.

TNP2K has undertaken several research activities and policy initiatives related to old-age poverty in Indonesia. This report, "Old-Age Poverty in Indonesia: Empirical Evidence and Policy Options - A Role for Social Pensions", presents Indonesia's first poverty report specifically dedicated to the analysis of old-age poverty. This report entails a detailed literature review, simulations and discussions on how Indonesia can make progress in achieving pension coverage of the elderly population by reviewing and discussing a variety of policy options related to social pensions.

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Acronyms and Abbreviations

ADB	Asian Development Bank
ASCC	ASEAN Socio-Cultural Community
ASEAN	Association of Southeast Asian Nations
ASLUT	Social Assistance for Elderly (*Asistensi Sosial Lanjut Usia Terlantar*)
Australian Aid	Australian Agency for International Development
BAPPENAS	National Development Planning Agency (*Badan Perencanaan dan Pembangunan Nasional*)
BPS	Central Bureau of Statistics (*Biro Pusat Statistik*)
BSM	Cash Transfers for Poor Students (*Bantuan Siswa Miskin*)
CBN	Cost of Basic Needs
DJSN	National Social Insurance Council (*Dewan Jaminan Sosial Nasional*)
FF-DC	Fully-Funded Defined-Contribution
GDP	Gross Domestic Product
GIZ	German Society for International Cooperation (*Deutsche Gesellschaft für Internationale Zusammenarbeit*)
ILO	International Labour Organisation
JAMKESMAS	National Health Insurance (*Jaminan Kesehatan Masyarakat*)
MoF	Ministry of Finance
MOSA	Ministry of Social Affairs
MP3KI	Master Plan for the Acceleration and Expansion of Poverty Reduction (*Masterplan Percepatan dan Perluasan Pengurangan Kemiskinan Indonesia*)
OECD	Organisation for Economic Co-operation and Development
PAYG	Pay-As-You-Go
PKH	Conditional Cash Transfer Programme for Poor Families (*Program Keluarga Harapan*)
PMT	Proxy Means Test
PPLS	Data Collection of Social Protection Programmes (*Pendataan Program Perlindungan Sosial*)
PRSF	Poverty Reduction Support Facility
Raskin	Rice for the Poor (*Beras untuk Orang Miskin*)
SJSN	National Social Security System in Indonesia (*Sistem Jaminan Sosial Nasional*)
SKTM	Letter of Poor Status (*Surat Keterangan Tanda Miskin*)
Susenas	National Socioeconomic Survey
TNP2K	National Team for the Acceleration of Poverty Reduction (*Tim Nasional Percepatan Penanggulangan Kemiskinan*)
WB	World Bank

Executive Summary

Indonesia has made remarkable progress in reducing poverty levels over the last several decades. However, despite these achievements, poverty rates in many areas and among vulnerable groups remain alarmingly high.

On the need for social pensions in Indonesia

Indonesia in 2013 is an ageing society with an elderly population (60+) of approximately 20 million or eight percent of the total population. Due to continuously low fertility levels, lower mortality and higher life expectancy rates, the number of elderly in the country is predicted to increase to more than 80 million individuals by 2050 who will by then constitute about 25 percent of the total population.

The increase in the number of elderly poses a variety of policy challenges for health care provision, labour markets, saving plans and pensions. Only a small share of the elderly population is presently covered by any sort of formal pension (about eight percent) which leaves a majority of the elderly uncovered. In 2006, Indonesia created its first direct social assistance cash-transfer benefit programme (ASLUT) that focuses exclusively on the elderly. By 2013 ASLUT was operational in all Indonesian provinces and intends to cover about 32,500 beneficiaries by 2014. While this programme is a step in the right direction, it covers only a fraction of poor elderly. Even when programme coverage is narrowed to only cover those poor elderly with significant health problems, millions of elderly remain without any coverage.

Considering the rise in its elderly population and the low pension coverage, the Indonesian government has shown strong commitment to raise the number of elderly gaining access to formal pensions. In line with a variety of social welfare laws, the National Security Law (SJSN), declarations under ASEAN and commitments to a comprehensive social protection floor policy, Indonesia has endorsed a multi-pillar approach to providing income support in old age. However, the current reforms associated with the SJSN Law are aimed at providing income support for the future elderly generation - those working age adults that will retire in 15-40 years. While the success of the SJSN reforms still needs to be demonstrated, there remains substantial scope for addressing the need for pension coverage among the current elderly population. The substantial under-coverage of the elderly population by either a formal pension or social-assistance benefit (ASLUT) needs to be benchmarked against the wider socio-economic and policy context. The elderly population is, together with very young children, the population group with high poverty rates in Indonesia or, according to some estimates, the population group with the highest poverty rates. However, while several large scale social assistance programmes have been designed to address the specific needs of children such as Cash Transfers for Poor Students (BSM) or Conditional Cash Transfer Program for Poor Families (PKH), there is no comparable programme for the elderly that matches these programmes in terms of beneficiary coverage and financial allocations. Therefore, it is timely to consider the role of social pensions in Indonesia.

This report aims at filling several evidence gaps in the discussion on elderly and old age poverty in Indonesia. Firstly, it provides a detailed and comprehensive picture of the socio-economic circumstances of the current elderly generation. By doing so it provides Indonesia's first nationally representative poverty assessment on the elderly addressing aspects of education, health and remittances as well as poverty measurement. Second, the report outlines Indonesia's legal, political

and programme commitments to alleviate old age poverty and contrasts it with recent international experiences on pension reform. This report discusses in particular the benefits of social pensions for Indonesia's elderly, and outlines the pros and cons of poverty targeted and universal pension schemes. Thirdly, the report provides ex-ante simulation results on the poverty and fiscal impacts for selected social pension schemes.

Main findings

Poverty among the elderly

One of the most vulnerable groups in the country is Indonesia's elderly population. According to data from the March 2012 Susenas report, poverty among the elderly (60 years and older) amounts to 12.65 percent nationally compared to 11.95 percent of the non-elderly population. Poverty rates among the elderly tend to further increase with age (13.81 percent among elderly age 65 years and above; 14.92 percent among elderly age 70 years and above; and 15.42 percent among elderly age 75 years and above). The findings imply that currently about 2.5 million elderly (60 years and above) are considered to be poor in Indonesia. These figures increase further once elderly identified as vulnerable to poverty are included. If the official poverty lines from Central Bureau of Statistics (BPS) were increased by a factor of 1.2 (the near-poor poverty line), poverty rates among the elderly (60 years and above) would increase to 26.26 percent. Applying a factor of 1.5 times to the national poverty line increases this number to 41.93 percent, indicating that many more millions of elderly are vulnerable and are living just above the poverty line. In line with these findings, panel data from Susenas 2008, 2009 and 2010 show that in the age group of elderly 65-69 years old about 26 percent were categorised as poor at least once during the course of just two years, with four percent of all elderly having been poor in all three years (chronically poor).

Regional poverty differences

TNP2K research shows that very pronounced geographical differences exist in old-age poverty rates across provinces and between rural and urban areas. In line with the official rural and urban BPS poverty estimates, the research shows that old-age poverty rates, for example among the elderly aged 65 years and above, are much higher in rural (17.0 percent) than in urban areas (10.5 percent). However, both rural and urban old-age poverty rates are higher than those of the non-elderly population in these areas. An analysis of provincial poverty estimates shows that poverty rates among the elderly are not higher than those of the non-elderly population in all provinces. In several provinces, particularly in some provinces outside of Java, old-age poverty rates are lower than those of the non-elderly population. Cultural habits, earning possibilities, family structures and regionally specific migration patterns seem to be the main reasons behind these variations.

Gender differences in poverty rates and living arrangements

This research report does not find many differences in poverty rates among elderly men and women. However, significant gender differences exist in the family arrangements of elderly men and women. While most elderly men in all age groups are still married, the majority of elderly women tend to be widowed. For example, while about 85.6 percent of men in the age group 65-69 years are still married, only 42.9 percent of women are still married in the same age group. The main reasons behind this

significant difference are due to the increased life expectancy of women combined with elderly men tending on average to be married to younger women.

Socio-economic characteristics of the elderly

TNP2K research findings further illustrate that poverty among the elderly is related to many other factors, such as low education levels, poor health and high old-age labour participation rates.

Education

Indonesia has made remarkable progress in primary and secondary schooling over the last few decades. However, many are still illiterate among the current elderly generation. In the 65-69 age groups, about 28.5 percent are illiterate, with the rate increasing to more than 50 percent for those aged 75 years and older. Further significant differences exist along gender and regional lines. Women tend to show much higher illiteracy rates than elderly men. Likewise, illiteracy is much more pronounced in rural than urban areas.

Health

Elderly persons are significantly more likely to suffer from chronic health problems and disabilities. While it is common to expect deteriorating health conditions at older ages, the ability and capability of elderly households to obtain quality treatment for health problems depends significantly on wealth. The research presented, based on Susenas, shows that while poor and non-poor elderly are equally likely to suffer from health problems, the poor are less likely to seek treatment (inpatient and outpatient). Furthermore, when the elderly poor seek treatment they do so at lower cost facilities, such as public hospitals and *puskesmas* (local clinics), while the majority of better-off elderly prefer to receive treatment from private healthcare professionals.

Employment

The majority of the elderly continue to work, although their labour force participation rates tend to decline at older ages. Significant gender differences exist in the types of work undertaken. While, for instance, about 69.0 percent of men in the 65-69 age group work for pay in the labour market, only 28.7 percent of women work for pay with the vast majority of women contributing through domestic and family work within the household. Analysis of Susenas data further shows that the poor elderly are somewhat more likely to work than non-poor elderly, underscoring the need for a substantial proportion of the elderly to continue working through old age to meet their basic needs.

Inter-household transfers

Data from the Indonesian Family Life Survey (IFLS 4) shows that private financial transfers (transfers from/to children, siblings, parents, persons outside the household) constitute a main source of income and insurance of households against consumption shortfalls and health risks, with the elderly more likely to benefit from and depend on such transfers.

Pension coverage

Only a small share (eight percent) of the current elderly generation receives any sort of formal pension. Since access to formal pensions has been restricted to persons who have worked for many years in the formal sector, public sector or the military, very few poor can claim access to these

benefits. In response to the high poverty rates among the elderly and their increased need to spend on health-related issues, combined with their diminishing work capacity, the Ministry of Social Affairs (Kemensos) created the ASLUT programme in 2006. ASLUT provides social assistance cash benefits to poor elderly who are considered neglected and without any means of self-support. In 2013, ASLUT aimed to cover about 27,000 elderly and expand this figure to 32,500 by 2014. While ASLUT is a step in the right direction to fighting old-age poverty, the coverage is far too small. Only 0.2 percent of all elderly and less than 1.5 percent of poor elderly in Indonesia are covered by this programme, compared to 2.5 million poor elderly (60 years and above), or the estimated 2.1 million elderly (60 years and above) living in the lowest decile of Indonesian households. Analysis of the Data Collection for Social Protection Programs (PPLS) 2011 reveals about 400,000 elderly persons with chronic health problems or disabilities among this bottom ten percent. ASLUT, therefore, has significant scope for extending its coverage.

Social pensions: poverty-targeted and universal pension scenarios

In order to tackle the problem of old-age poverty in the context of low pension coverage rates, many countries have introduced social pensions that complement formal sector pensions by providing income support to the elderly. While several different forms of social pensions exist, this report focuses its analysis on poverty-targeted and universal social pensions. More explicitly, this report simulates the potential effect on poverty rates among the elderly and the general population when social pensions are administered to the bottom five percent, ten percent, 15 percent or 20 percent of the population, versus a universal pension in which each all elderly would receive a pension benefit. Taking possible targeting errors into account, the analysis and simulations show that both poverty-targeted and universal pensions provide a meaningful way of fighting old-age poverty. For instance, assuming social pensions are provided to persons aged 70 years and older at a benefit level of Rp. 200,000 per month, old-age poverty rates would decrease to 11.94 percent (10.96 percent at a benefit level of Rp. 300,000 per month) from 14.57 percent if the poorest five percent were targeted, to 9.59 percent (8.29 percent) if the poorest ten percent were targeted, to 7.69 percent (6.28 percent) if the poorest 15 percent were targeted, to 6.37 percent (4.9 percent) if the poorest 20 percent were targeted, and to 3.51 percent (1.95 percent) if every elderly person aged 70 years or more received a social pension.

While social pensions in the universal scenario show the highest impact on poverty rates, they are associated with higher costs. Poverty-targeted social pensions perform better in terms of the poverty reduction/programme cost ratio. However, both poverty-targeted and universal social pension schemes are shown to be fiscally affordable scenarios as the current costs for all scenarios resulted in expenditures equivalent to less than one percent of Indonesia's GDP.

Legal background and pension reform

The Indonesian constitution guarantees the fulfilment of basic needs for all people. The special needs of elderly people have been subsequently addressed in a variety of laws and decrees, including Law Number 4 of 1965 on the provision of assistance to disadvantaged older persons, Law Number 13 of 1998 on the welfare of older persons[1], Law Number 40 of 2004 (Law on Sistem Jaminan Sosial

[1] Law 13 of 1998 superseded Law 4 of 1965.

Nasional, or SJSN), Law Number 11 of 2009 on social welfare and Law Number 24 of 2011 on social security providers.

Law Number 13 of 1998 led to the creation of the ASLUT programme in 2006, and Law Number 40 of 2004 created the National Social Security Council (DJSN), which spurred reforms for formal and informal sector pensions in Indonesia. In addition to national laws, the Social Protection Floor Strategy (2012) and the Master Plan for the Acceleration and Expansion of Poverty Reduction (MP3KI) (2013) envision the introduction of social pensions in Indonesia, with a particular focus on poor elderly. Furthermore, Indonesia has signed several ASEAN declarations over the last 15 years that aim at improving the welfare situation of the elderly (ASEAN Vision 2020, ASEAN Human Rights Declaration, ASEAN Charter, ASEAN Strategic Framework, and Plan of Action for Social Welfare).

Policy recommendations

Indonesia still lacks a significant pension programme that provides significant coverage for poor and vulnerable elderly. The number of elderly persons covered under ASLUT is very small (about 27,000 persons in 2013) while the SJSN pension reform will require at least 20 years to show significant increases in pension coverage rates. Current poor elderly are unlikely to be able to participate in the SJSN pension and old-age saving accounts. Therefore, for the short- and medium-term, the government should consider the policy options presented in this report in order to address poverty among the elderly.

The minimalist approach and least expensive option (Option 1) would be to ensure that ASLUT is covering at least its target population, namely the poor elderly who face severe health and mobility constraints and who are neglected. Under this option, national poverty rates of the elderly would remain high as only a small subset of the total elderly poor would be covered. However, implementing full coverage the current ASLUT programme would provide assistance for the poorest and most vulnerable elderly person.

Similarly, in line with existing social welfare legislation, an alternative option (Option 2) would be to expand the coverage of ASLUT to all poor elderly who suffer from severe disabilities. As prevalence of severe disability among the elderly poor is more than ten percent, this policy option would have nation-wide impacts on poverty rates among the elderly. Acknowledging that ASLUT has a narrow focus and unique design for elderly social assistance, it is worth considering much broader social pensions (both poverty-targeted and universal; Option 3), that most Asian and Latin American countries have introduced, in order to substantially reduce old-age poverty rates. This report demonstrates that these types of social pensions are an affordable policy option for Indonesia and that the implementation of these social pensions would enable the Government of Indonesia to meet its commitments to improve social protection for the elderly.

1 Demographic Trends

Indonesia has achieved remarkable progress in a variety of economic and social indicators over the last 50 years. Fertility has decreased from nearly six children per woman in 1961 to 2.1 in 2010, with Indonesian fertility levels currently being at the replacement level (Angeles et al., 2005; Hull, 1976, 1980, 1981, 2010; Hull and Tukiran, 1976; Hull and Davarna, 1988; Nam et. al, 1991). According to the World Development Indicators (2012) during the same time period, infant and under-five mortality rates dropped sharply from 125 per thousand live births to 25 (infant mortality), and from 211 per inthousand live births to 31.8 (under-five mortality). With improvements in general living conditions over the last 50 years in Indonesia, life expectancy for both women and men increased rapidly with both sexes having gained more than 20 years in additional life expectancy over the period.

Table 1: Historical development trends in Indonesia (1961-2010)

Indicator	1961	1970	1980	1990	2000	2010
Overall population (millions)	94.2	118.0	151.0	184.0	213.0	240.0
Fertility rate	5.7	5.5	4.4	3.1	2.5	2.1
Infant mortality rate (per 1,000 live births)	125	99.5	75.7	54.1	37.6	24.8
Under-five mortality rate (per 1,000 live births)	211	164	120	81.6	52.5	31.8
Male life expectancy at birth (years)	47.1	50.3	56	60.5	64.1	67.3
Female life expectancy at birth (years)	44.6	53.5	59.3	63.8	67.3	70.6
GDP/capita (in 2005-US$-PPP)	-	-	1,320	2,010	2,620	4,090

Source: World Development Indicators 2012

Table 2: Overall population trends in Indonesia (2010-2050)

Age Group (years)	<18	18-34	35-59	60+	All
Population 2010 (thousands)	77,800	72,100	70,400	19,600	240,000
Population share (%)	0.32	0.3	0.29	0.08	1
Population 2015 (thousands)	76,700	72,800	80,400	24,000	254,000
Population share (%)	0.3	0.29	0.32	0.09	1
Population 2020 (thousands)	74,600	72,400	88,900	30,500	266,000
Population share (%)	0.28	0.27	0.33	0.11	1
Population 2030 (thousands)	68,600	72,000	99,300	47,300	287,000
Population share (%)	0.24	0.25	0.35	0.16	1
Population 2040 (thousands)	64,000	68,100	103,000	66,000	301,000
Population share (%)	0.21	0.23	0.34	0.22	1
Population 2050 (thousands)	60,100	63,000	102,000	82,600	308,000
Population share (%)	0.2	0.2	0.33	0.27	1

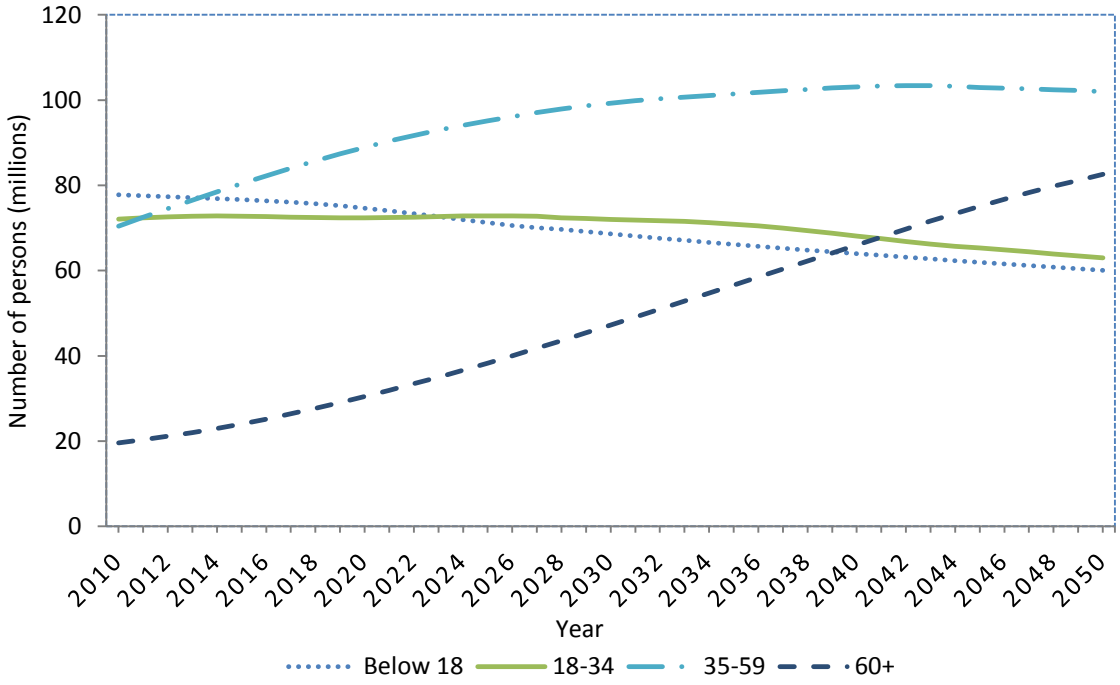
Source: World Bank 2012 population projections (mimeo).
Note: Absolute numbers must be multiplied by 1,000 to obtain total population estimates.

The decline in fertility and mortality rates together with an increase in life expectancies of Indonesians has led to significant changes to Indonesia's demographic structure, with the country having entered a period of decreasing dependency ratios due to lower fertility rates and a healthier adult population. Economists and demographers tend to speak of a period of the "demographic gift/dividend" in which the working age population, i.e. individuals aged 18 to 60, represents a very large share of the overall population with sufficient income generated by this group to support children and the elderly.

While Indonesia has benefitted for several years from a demographic structure that helped to foster economic growth, the country is becoming, like many Western countries, an aging society in which elderly people represent an ever increasing share of the total population. This demographic trend is mainly the result of Indonesia's continuing success of limiting population growth and improving overall living conditions that lead to higher life expectancies. However, it also presents a variety of new challenges and the need to look specifically at the situation of the elderly.

Table 2 and Figure 1 present population projections, based on the 2010 population census. Table 2 shows that people aged 60 years or more already constituted a large share of the population (eight percent) in 2010. However, this share of elderly individuals is predicted to increase significantly, up to 33 percent in 2050, with the absolute number of elderly expected to grow rapidly from 19.6 million people in 2010 to more than 80 million by 2050.

Figure 1: Demographic trends in Indonesia, population projections (2010 – 2050)



Source: World Bank 2012 population predictions (mimeo).

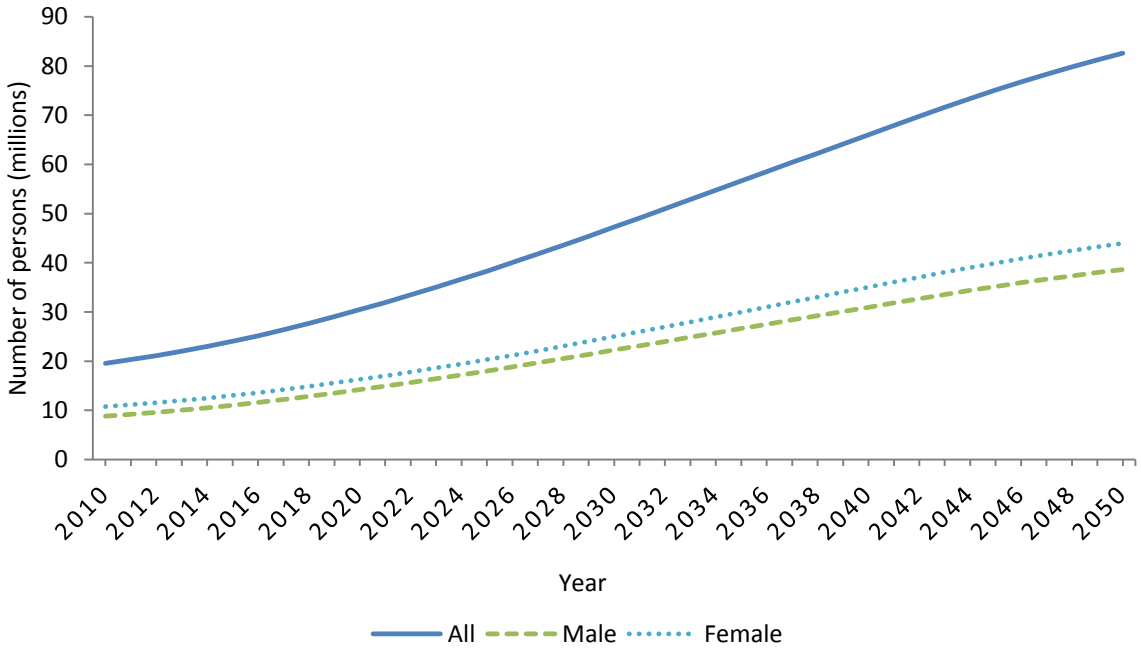
As Indonesia becomes an aging society, it is important to note that among the elderly population there are now and will be in the future, far more women than men. This phenomenon is often referred to by demographers as the "feminisation of aging". Due to biological differences, but also differences in risky lifestyle behaviours, such as smoking, driving, and hazardous working conditions of men, women in most countries tend to have a higher life expectancy than men. Table 3 and Figure 2 show the respective population numbers disaggregated by gender.

Table 3: Population projections for Indonesia by gender (2010 – 2050)

Sex	Age group (years)	2010	2015	2020	2030	2040	2050
Men	<18	39,600,000	39,000,000	38,000,000	34,900,000	32,500,000	30,500,000
	18-34	36,100,000	36,700,000	36,700,000	36,600,000	34,600,000	31,900,000
	35-59	35,100,000	40,000,000	44,100,000	49,500,000	51,800,000	51,500,000
	60+	8,825,588	11,000,000	14,200,000	22,300,000	31,000,000	38,600,000
	All	120,000,000	127,000,000	133,000,000	143,000,000	150,000,000	153,000,000
Women	<18	38,200,000	37,600,000	36,700,000	33,800,000	31,500,000	29,500,000
	18-34	36,000,000	36,100,000	35,700,000	35,400,000	33,600,000	31,000,000
	35-59	35,300,000	40,500,000	44,800,000	49,800,000	51,300,000	50,400,000
	60+	10,800,000	13,000,000	16,300,000	25,000,000	35,100,000	43,900,000
	All	120,000,000	127,000,000	133,000,000	144,000,000	151,000,000	155,000,000

Source: World Bank 2012 population projections (mimeo).

Figure 2: Demographic trends in Indonesia, population projections for elderly 60+ (2010-2050)



Source: World Bank 2012 population predictions (mimeo).

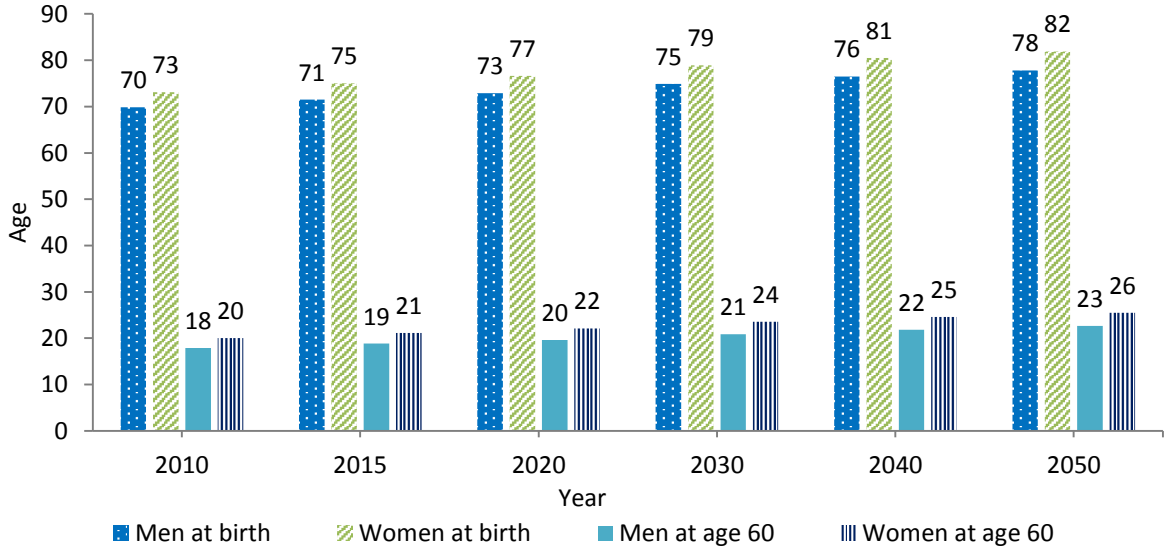
In addition to increasing the absolute number of elderly and their share in the population overall, it is worth noting that Indonesians life expectancy across all age cohorts, and for both men and women, is predicted to further improve (Table 4, Figure 3).The improving life expectancy rates are also highly relevant to policies for old-age social assistance. The life expectancy of individuals at age 60 (65) will continuously increase from 17.9 years currently to 22.7 years by 2050 (14.5 years currently to 18.7 years by 2050). This development has repercussions for policy decisions related to work in old age, retirement ages, savings, intra-household transfers, household structures and the government's design of social protection/assistance measures that focus on the elderly.

Table 4: Life expectancy projections for Indonesia in years, by gender (2010 – 2050)

Sex	Age group (years)	2010	2015	2020	2030	2040	2050
Men	At birth	69.8	71.5	72.9	74.9	76.5	77.8
	At age 20	52.7	54.1	55.3	57.0	58.4	59.6
	At age 60	17.9	18.8	19.6	20.8	21.8	22.7
	At age 65	14.5	15.3	16.0	17.1	17.9	18.7
Women	At birth	73.1	75.0	76.6	78.9	80.5	81.9
	At age 20	55.5	57.1	58.5	60.5	61.9	63.1
	At age 60	20.0	21.2	22.1	23.5	24.6	25.5
	At age 65	16.3	17.3	18.2	19.4	20.4	21.2

Source: World Bank 2012 population projections (mimeo).

Figure 3: Predicted life expectancy in Indonesia, population projections (2010 – 2050)



Source: World Bank 2012 population projections.

The tables and figure presented above show the most important demographic trends in Indonesia at the national level. Given Indonesia's regional diversity, demographic trends and the extent of aging within local communities might be very different from village to village, from *kecamatan* to *kecamatan*, *kabupaten* to *kabupaten* or from province to province. In particular, (internal) migration in Indonesia (Ananta and Arifin 2009) is a factor, in addition to fertility and mortality patterns, that together determine whether a certain community or region has a higher share of elderly in its population. Regions with low fertility rates and high outmigration rates, such as some areas in Eastern Java, already have communities in which the share of elderly is above 20 percent of the local population (Kreager and Schröder-Butterfill, 2005; Rammohan and Magnani, 2012). In general, the strong migration patterns of working-age populations from rural to urban areas, especially to the main cities in Indonesia, has led to some communities having a larger share of elderly, and to various forms of complex family arrangements related to household composition and transfers/remittances.

2 Poverty and the Elderly

National statistical agencies and the World Bank's poverty assessments usually do not disaggregate their poverty statistics by age groups - the only exception being child poverty rates. Therefore, very little is in fact known about the poverty situation of the elderly both at the national and international level.

For developed countries, Whitehouse (2000) and Bloom et al. (2011) state that in countries that make up the Organisation for Economic Co-operation and Development (OECD), older people were significantly poorer than non-elderly during the 1960s/1970s, while nowadays older people tend to be better-off than the non-elderly. This relative welfare improvement of older people is explained by the fact that the current generation of elderly are able to benefit for the first time from long and significant contributions into private or public social security systems. Similarly, among Eastern European and Central Asian countries that transitioned from socialist economies, older people were able to rely on built-up assets and generous pensions, and, therefore, were typically better off than other population groups.

For developing countries, the poverty situation of elderly differs significantly from country to country, with currently no longitudinal study existing on developing countries. A World Bank report (WB, 2009) on Sri Lanka, India and several countries in North Africa suggests that the elderly fare better than the general population, while Deaton and Paxson (1995, 1998a) find that poverty among older people was higher in Ghana, Pakistan, South Africa and Ukraine. Recently, the World Bank published a set of papers on the situation of elderly in Latin America that came to very different conclusions. In these studies, old-age poverty rates were found to be higher than those of the general population in most Latin American countries, except for Argentina, Brazil, Chile and Uruguay (Dethier et al., 2010). However, Cotlear and Tornarolli (2010) report quite the opposite with Columbia, Costa Rica and Mexico being the only countries in which old-age poverty rates are higher than those of the general population. Since both studies differ quite substantially in how they measure poverty within the respective countries, they mainly reinforce earlier results from Deaton and Paxson (1995, 1998a), which show that age-specific poverty rates are quite sensitive to the choice of the poverty line, economies of scale and adult equivalence scales. Interestingly, little evidence for Asians countries exists, however, some studies found that old-age poverty rates in India were not higher than those of the general population (Pal and Palacios, 2011), while old-age poverty rates in Thailand were significantly higher than those of the general population (WB 2013c).

Empirical evidence on old-age poverty in Indonesia

Besides a few small-scale qualitative studies with very limited regional coverage (Rudkin, 1993; Kreager and Schröder-Butterfill, 2005, 2008), there is no recent quantitative evidence on the poverty situation of older persons in Indonesia. Neither the Central Statistical Office (BPS) nor the World Bank in its reports (WB, 2006, 2012a, 2012b) provides poverty statistics specifically for the elderly or poverty data disaggregated by age groups. This report tries to overcome this knowledge gap by providing poverty estimates for the elderly, for the period 2005-2012. It further analyses the robustness of the poverty profile of the elderly according to different specifications and methodologies and puts the poverty situation in perspective with other socio-economic characteristics of the elderly. By doing so, this report offers Indonesia's first poverty assessment that focuses on the welfare of the elderly.

Measurement of poverty

This report follows the official procedure of BPS to measure poverty. Under this methodology, a person is classified as poor if his/her consumption expenditure is below the poverty line. A person's consumption expenditures are calculated by summing-up all household expenditures and dividing this figure by the number of persons living in the household (per-capita expenditure measure). This study uses the consumption aggregate provided by BPS in its annual Susenas rounds (March rounds) and the official poverty lines that differ by province and rural/urban areas, in order to allow for variability in prices and food availability/preferences across regions. The final poverty estimates refer to individuals and not households, in line with BPS practices. By following BPS data and procedures, TNP2K reproduced the published BPS poverty estimates for the general population for 2008-2012, with very small differences to the 2005-2007 official statistics (less than 1 percentage point).

Table 5 and Figure 2 present poverty statistics for different age groups and their respective shares in the overall population. From Table 5, it can be clearly established that old-age poverty rates across all age groups are higher than those of the rest of the population. This observation holds true for the entire period (2005-2012) and is particularly pronounced the older people get. For instance, persons age 70[2] or above experience at least three percentage points higher poverty rates than the overall population[3]. In contrast to findings from developed countries, as stated above (Whitehouse, 2010; Bloom et al. 2011), there has been no relative progress in old-age poverty rates. For the eight year period under consideration, the situation of the elderly has not improved more than that of the general population.

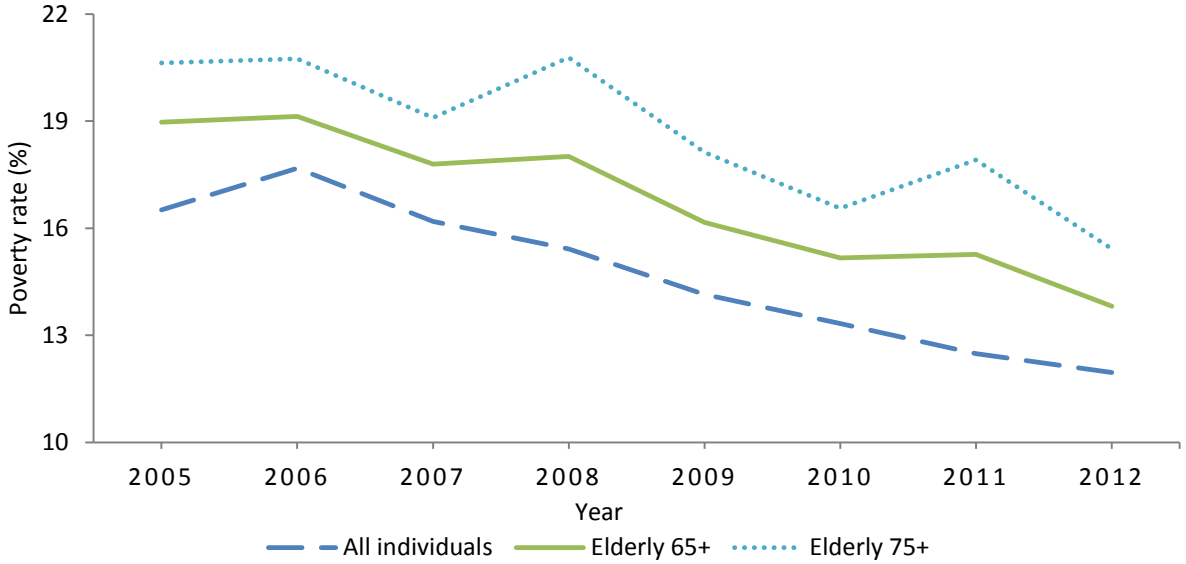
[2] The term 60+ includes elderly aged 60. The same holds analogously for the terms 65+, 70+, and 75+ throughout this report.
[3] The difference between the elderly and the rest of the population is even larger than reported here. Since the poverty figure for the total population includes the elderly, the poverty rate of the remaining population groups is much smaller than the reported number for the overall population. In addition, research around the world, including Indonesia (such as in Cameron and Williams (2009) or Banerjee and Duflo (2010), who all use IFLS data), has shown that poor individuals are more likely to die early in life. Therefore, old-age poverty rates suffer from a survivor bias towards richer individuals. This means that old age poverty rates would be higher if one could correct for survival differences. Furthermore, Table 5 reports a slight break in the population share of the elderly between 2010 and 2011. This result is likely due to an update in the Susenas sampling frame for 2011 that is related to the 2010 population census.

Table 5: Poverty rates for persons aged 60 and above, in Indonesia (2005 – 2012)

Year	Poverty Rates (%)					Population Share			
	Total	60+	65+	70+	75+	60+	65+	70+	75+
2005	16.51	17.69	18.97	19.72	20.63	8.02	5.12	3.13	1.48
2006	17.68	17.88	19.13	19.55	20.75	8.67	5.75	3.47	1.70
2007	16.19	16.55	17.80	18.52	19.10	8.78	5.91	3.66	1.92
2008	15.42	16.82	18.01	19.04	20.78	8.33	5.61	3.42	1.77
2009	14.15	15.16	16.16	17.01	18.13	8.81	5.86	3.62	1.89
2010	13.33	14.18	15.17	15.83	16.56	9.20	6.12	3.76	1.94
2011	12.49	13.84	15.27	16.52	17.91	7.58	5.03	3.06	1.61
2012	11.96	12.65	13.81	14.92	15.42	7.56	5.02	3.05	1.61

Source: Calculations by TNP2K based on annual Susenas rounds (March).
Note: Official BPS poverty lines (rural/urban province level) applied. Poverty rates refer to individuals. Survey weights applied.

Figure 4: Poverty rates in Indonesia, annual Susenas rounds (March) (2005 – 2012)



Source: Calculations by TNP2K based on annual Susenas rounds (March).

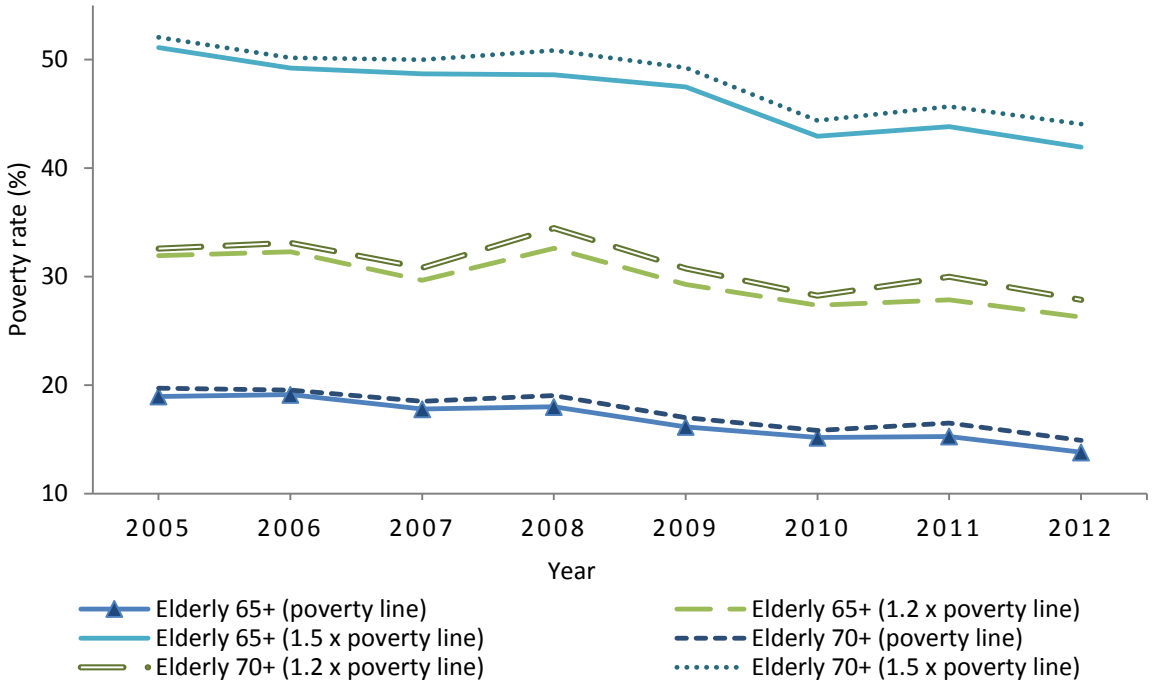
In addition to looking at BPS's official classification of poverty it is also interesting to look at the near-poor or those vulnerable to poverty. According to BPS, these are individuals who live below 1.2 times the official poverty line. Table 6 and Figure 5 depict poverty figures once the poverty line is adjusted for 1.2 times, as well as for 1.5 and 2 times the official poverty line. The results suggest that a very large part of the elderly population can be classified as vulnerable to poverty, just living above the official poverty line. Data from 2012 shows more than a quarter of the elderly population above 65 or 70 years can be classified as vulnerable to poverty. ***Taking into account that about five percent (three percent) of the Indonesian population is at least 65 (70) years old, this implies that with a population of about 240 million in 2012 about three million (two million) elderly people live in poverty or are acutely vulnerable to poverty.***

Table 6: Poverty rates in Indonesia, different poverty lines (2005 – 2012)

	Poverty rates (%) for elderly 65+ Poverty line multiplied by:				Poverty rates (%) for elderly 70+ Poverty line multiplied by:			
Year	1	1.2	1.5	2	1	1.2	1.5	2
2005	18.97	31.94	51.12	73.71	19.72	32.58	52.06	73.16
2006	19.13	32.29	49.22	71.57	19.55	33.12	50.19	73.53
2007	17.80	29.66	48.70	68.74	18.52	30.81	50.01	69.34
2008	18.01	32.61	48.62	70.27	19.04	34.49	50.86	72.43
2009	16.16	29.28	47.50	68.48	17.01	30.76	49.25	70.01
2010	15.17	27.36	42.94	61.25	15.83	28.25	44.38	62.52
2011	15.27	27.86	43.82	62.33	16.52	30.00	45.68	64.75
2012	13.81	26.26	41.93	60.59	14.92	27.88	44.07	62.89

Source: Calculations by TNP2K based on annual Susenas rounds (March).
Note: Official BPS poverty lines (rural/urban province level) applied. Poverty rates refer to individuals. Survey weights applied.

Figure 5: Poverty rates in Indonesia (vulnerability), annual Susenas rounds (March) (2005 – 2012)



Source: Calculations by TNP2K based on annual Susenas rounds (March).
Note: Official BPS poverty lines (rural/urban province level) applied. Poverty rates refer to individuals. Survey weights applied.

An alternative way of defining vulnerability to poverty among individuals and households lies in tracking individuals/households over time. The Susenas March rounds for 2008, 2009 and 2010 allow researchers to follow a cohort of households (a subset of the data) over this three-year period[4]. The panel structure can be exploited to analyse poverty dynamics. To analyse chronic and transient poverty rates, a person is classified as "chronic poor" if they have been poor in all three Susenas

[4] The same Susenas panel data structure was exploited in WB (2012a), with similar rates derived for the overall population.

rounds, while an individual is defined as "transient poor" if they were poor in at least one of the three rounds but not in all three rounds. Together, the transient and chronic poverty rates provide an alternative measure of the rate of individuals who are vulnerable to poverty.

Table 7: Chronic vs. transient poverty rates among the elderly (2008-2010)

Age	Poverty in 2008 (%)		All (%)		Men (%)		Women (%)	
(years)	weighted	unweighted	chronic	transient	chronic	transient	chronic	transient
All	16.09	16.43	4.77	22.98	4.59	22.63	5.00	23.44
<18	23.45	23.70	8.32	28.28	8.52	29.12	8.10	27.38
18-59	14.11	14.45	3.88	21.16	3.72	20.65	4.11	21.87
60-64	14.74	14.59	3.94	23.08	3.96	22.45	3.91	23.92
65-69	16.86	17.14	4.09	25.75	3.39	24.91	4.96	26.78
70-74	18.59	18.33	4.87	27.16	4.19	28.28	5.64	25.90
75+	20.42	20.59	6.51	29.19	7.03	30.91	5.87	27.02

Source: Calculations by TNP2K based on Susenas March 2008, March 2009, March 2010 panel components.
Note: The term 'weighted' refers to the use of the individual weights from Susenas, while 'unweighted' refers to calculations in which no weights were used at all. Chronically poor is defined as being poor in all three rounds. Transient poor is defined as being poor at least once but not being chronically poor.

Table 7 shows the results for individuals who could be tracked through all three rounds[5]. While the official BPS 2008 poverty figure was slightly below 16 percent, the figure obtained here is only marginally higher and remains comparable. ***Across all age groups, children and the elderly are found in the age groups with the highest poverty rates*** (columns 1 and 2). Chronic and transient poverty rates for the overall sample (columns 3 and 4) show that, for instance, about 30 percent of the elderly aged between 65-69 years have been poor between 2008 and 2010 at least once, with about four percent of all elderly in this age cohort being poor during all three time periods. As shown above, poverty rates in this age group (65-69 age cohorts) were about 18 percent. The four percent of chronic poor in this age group, therefore, suggests that about ***20 percent to 25 percent of all elderly poor are chronic poor.*** Consistent with previous findings, old-age poverty rates both in chronic and transient poverty rates seem to increase with age. ***Among elderly persons aged 75 years and older, more than one-third have been poor at least once between 2008 and 2010.***

Old-age poverty rates do not differ solely by age group, but also by several other characteristics such as gender and location. With respect to differences between elderly men and women, Table 8 and Figure 6 show old-age poverty rates disaggregated by gender. The first thing to note is that the ***poverty rates for both elderly men and women are higher than those of the general population over the entire period.*** Secondly, old-age poverty rates for women in the 60+ and 65+ age groups seem to be slightly higher than those for men, while in the age groups 70+ and 75+ the gender differences seem to level out. One possible explanation for these variations could be age differences in marriage patterns where older men (e.g. 70+ or 75+) are married to relatively younger women (60+ or 65+), in which case the same elderly couple/household has the same poverty rate.

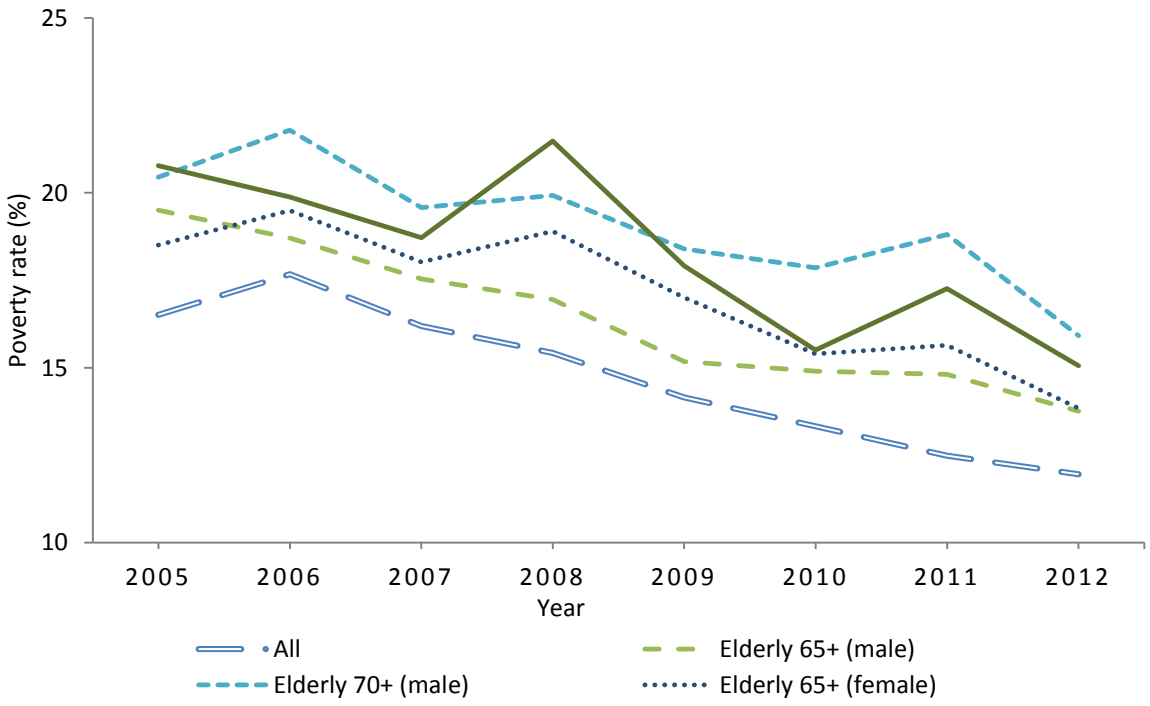
[5] Unfortunately, since no specific panel weights are available the following statistics are unweighted. However, the first column of the table illustrates what would happen if one uses the 2008 Susenas weights from the full sample applied to the panel sub-sample. While this approach is not perfect either it shows at least some robustness in the results with the unweighted values being relatively close to the weighted ones.

Table 8: Poverty rates for the Elderly in Indonesia, by gender (2005 – 2012)

	Poverty rates (%)								
Year	Total	Men 60+	Men 65+	Men 70+	Men 75+	Women 60+	Women 65+	Women 70+	Women 75+
2005	16.51	17.37	19.51	20.77	20.45	17.98	18.51	18.76	20.78
2006	17.68	17.26	18.71	20.32	21.79	18.43	19.50	18.85	19.88
2007	16.19	15.97	17.54	18.96	19.58	17.06	18.02	18.16	18.72
2008	15.42	15.80	16.95	18.23	19.93	17.71	18.90	19.70	21.48
2009	14.15	14.35	15.18	16.90	18.4	15.87	17.01	17.10	17.91
2010	13.33	13.60	14.90	16.58	17.86	14.69	15.40	15.21	15.51
2011	12.49	13.64	14.81	15.89	18.81	14.00	15.64	17.00	17.26
2012	11.96	12.46	13.76	15.23	15.92	12.81	13.84	14.69	15.06

Source: Calculations by TNP2K based on annual Susenas rounds (March).
Note: Official BPS poverty lines (rural/urban province level) applied. Poverty rates refer to individuals. Survey weights applied.

Figure 6: Poverty rates for the Elderly in Indonesia, by gender, annual Susenas rounds (March) (2005 – 2012)



Source: Calculations by TNP2K based on annual Susenas rounds (March).
Note: Official BPS poverty lines (rural/urban province level) applied. Poverty rates refer to individuals. Survey weights applied.

Table 9 shows poverty rates for the non-elderly population disaggregated by gender while the first column repeats the poverty rate for the total population. Comparisons of Table 8 and Table 9 reveals that poverty rates among the non-elderly population across both genders are lower than those of the respective elderly age groups. The disparity increases markedly with higher age cut-offs. In general, the poverty rates of the non-elderly are relatively close to the total population poverty rates, which is in line with the non-elderly comprising of a larger share in the overall population.

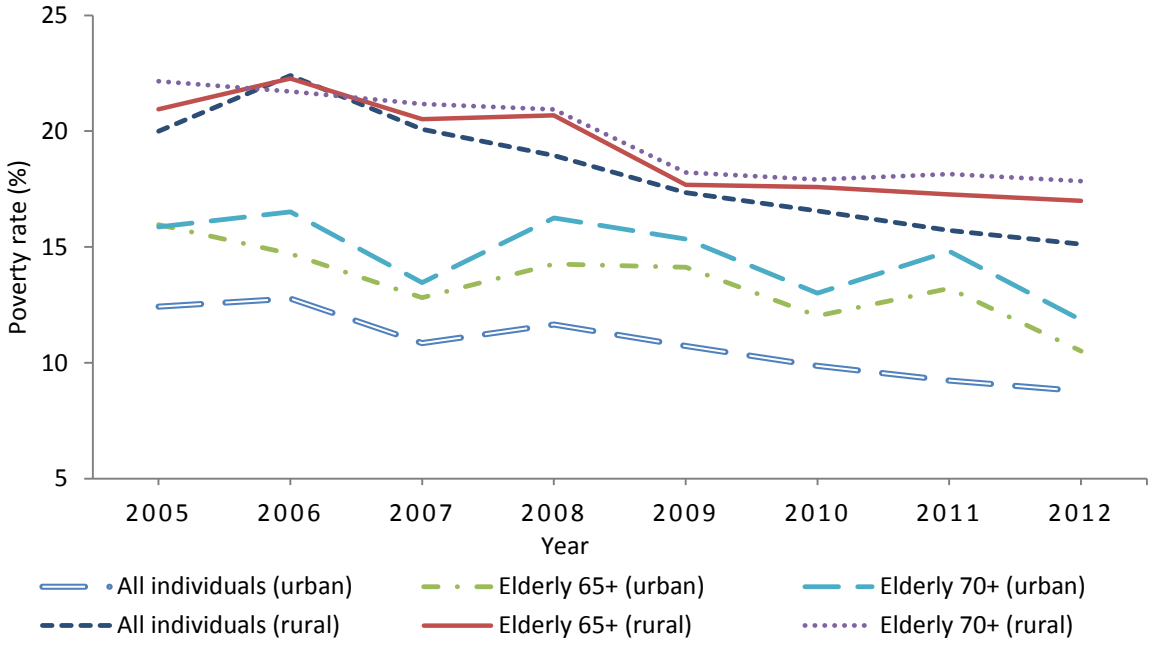
Table 9: Poverty rates among the non-elderly in Indonesia (2005 – 2012)

	Poverty rates (%)								
		Men				Women			
Year	Total	<60	<65	<70	<75	<60	<65	<70	<75
2005	16.51	16.37	16.30	16.32	16.39	16.48	16.50	16.53	16.54
2006	17.68	17.55	17.47	17.45	17.47	17.77	17.73	17.80	17.80
2007	16.19	16.20	16.11	16.10	16.13	16.11	16.08	16.12	16.14
2008	15.42	15.32	15.28	15.28	15.29	15.29	15.30	15.35	15.39
2009	14.15	14.13	14.09	14.07	14.08	14.00	13.99	14.06	14.09
2010	13.33	13.22	13.16	13.15	13.18	13.28	13.28	13.34	13.37
2011	12.49	12.34	12.32	12.34	12.35	12.44	12.40	12.42	12.48
2012	11.96	11.95	11.91	11.91	11.94	11.87	11.84	11.85	11.89

Source: Calculations by TNP2K based on annual Susenas rounds (March).
Note: Official BPS poverty lines (rural/urban province level) applied. Poverty rates refer to individuals. Survey weights applied.

While gender differences in old-age poverty rates are relatively small or non- existent, poverty rates by rural and urban location and across provinces differ significantly. Several academic papers on Indonesia have documented rural-urban and provincial differences in poverty: Akita and Lukman, 1995; Akita and Alisjahbana, 2002; Asra, 1999; Bidani and Ravallion, 1993; Booth, 1993, 2000; Islam and Khan, 1986; Ravallion and van de Walle, 1991; Ravallion and Lokshin, 2007. As is widely documented in BPS's annual reports, "Data dan Informasi Kemiskinan", rural poverty rates are consistently higher than urban poverty rates even when taking price differentials in living costs between rural and urban areas into account (rural poverty lines are always lower than urban poverty lines for the same province).

Figure 7: Poverty rates in Indonesia (urban/rural), annual Susenas rounds (March) (2005 – 2012)



Source: Calculations by TNP2K based on annual Susenas rounds (March).
Note: Official BPS poverty lines (rural/urban province level) applied. Poverty rates refer to individuals. Survey weights applied.

Table 10 and Figure 7 show the 2005-2012 poverty rates disaggregated by age group and rural-urban location. Urban poverty rates across all years are clearly below rural poverty rates by about seven to eight percentage points for the overall population. In both rural and urban areas, poverty rates of the elderly are higher than those of the overall population. Interestingly, the difference is particularly pronounced for urban areas, in which old-age poverty rates are about three percentage points higher than those of the overall population.

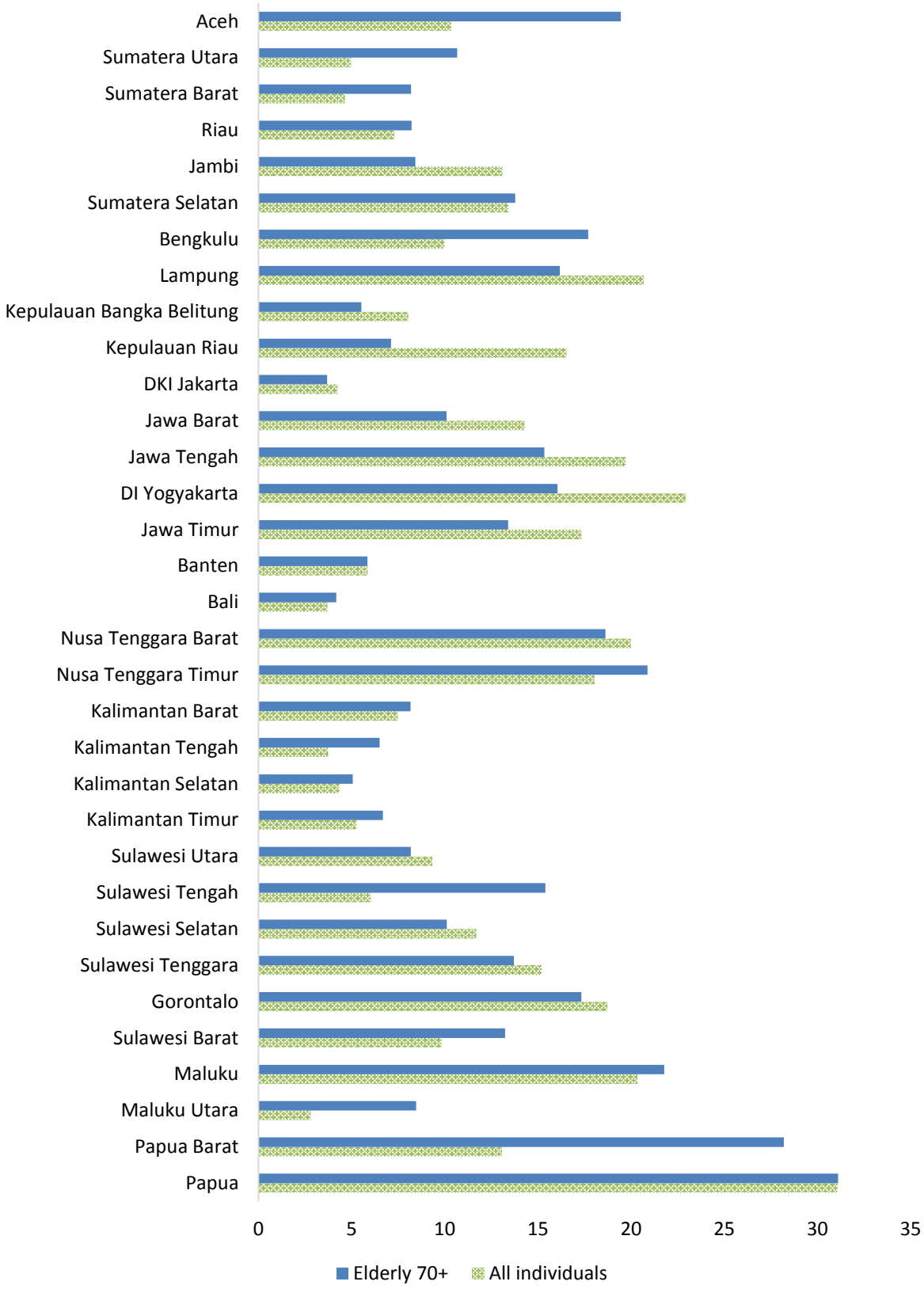
Table 10: Rural-Urban poverty rates in Indonesia (2005 – 2012)

	Poverty rates (%)						
		Total		Elderly 65+		Elderly 70+	
Year	Total	Urban	Rural	Urban	Rural	Urban	Rural
2005	16.51	12.43	20.00	15.96	20.95	15.86	22.16
2006	17.68	12.77	22.40	14.7	22.27	16.51	21.72
2007	16.19	10.85	20.08	12.81	20.52	13.46	21.17
2008	15.42	11.65	18.95	14.27	20.69	16.26	20.94
2009	14.15	10.73	17.35	14.13	17.68	15.34	18.21
2010	13.33	9.87	16.56	12.03	17.59	13.01	17.91
2011	12.49	9.23	15.71	13.21	17.27	14.82	18.15
2012	11.96	8.78	15.12	10.50	17.00	11.85	17.84

Source: Calculations by TNP2K based on annual Susenas rounds (March).
Note: Official BPS poverty lines (rural/urban province level) applied. Poverty rates refer to individuals. Survey weights applied.

As stated above, poverty rates do not only differ by rural and urban status but also by province. Table A1 (in the appendix) and Figure 8 present poverty rates by province and age group for the 2012 Susenas March round. The results first confirm that there are strong regional variations in poverty rates in the overall population, with poverty in Jakarta being relatively low at 3.7 percent and poverty in places like Papua being as high as 30 percent. The most important result from Table A1 and Figure 8 is that old-age poverty rates are not higher than those of the overall population in every province. It is difficult to find a general spatial pattern, but **old-age poverty rates are much higher than those of the general population in Java,** while on the other islands no clear picture emerges with old-age poverty being substantially lower in some places, like Papua Barat or Aceh provinces. In line with these findings of strong regional differences in the comparison of old-age poverty rates vs. poverty rates in the overall population, Table A1 also shows that no clear age-poverty gradient emerges among the elderly age groups (60+, 65+, 70+, 75+) across the different provinces. In Javanese provinces, poverty is particularly pronounced among the very old, however, this pattern does not hold for a variety of other provinces.

Figure 8: Provincial poverty rates (%) in Indonesia (2012)



Source: Annual Susenas rounds 2012 (March).
Note: Official BPS poverty lines (rural/urban province level) applied. Poverty rates refer to individuals. Survey weights applied.

Demographic aspects and poverty of the elderly

Poverty and household living arrangements

In order to better understand old-age poverty in Indonesia, it is important to shed more light on the living arrangements of the elderly. Understanding the role of living arrangements is relevant as they affect the measurement of poverty, and they also help to learn more about the causes of poverty, and thereby contribute to the design of appropriate policies and programs.

This section starts with analysing marriage patterns among the elderly. It is most common among Indonesian adults, and especially among the generation of elderly that are the focus of this research, that most people have been married at one point in time. Table 11 confirms this basic assumption, showing that only about one percent of elderly men and women were not married at one point in time.

Table 11: Marital status in Indonesia in 2012 by age and gender

	Men				Women			
Status	60-64	65-69	70-74	75+	60-64	65-69	70-74	75+
No. of individuals (thousands)	2,995	2,273	1,563	1,639	3,200	2,518	1,963	2,274
Unmarried (%) (1=yes, 0=no)	0.83	0.57	0.57	0.93	1.18	1.33	1.00	1.00
Married (%) (1=yes, 0=no)	89.22	85.55	80.21	71.31	54.59	42.91	27.27	16.19
Divorced (%) (1=yes, 0=no)	1.27	1.51	0.97	0.97	3.47	3.27	2.89	2.21
Widowed (%) (1=yes, 0=no)	8.67	12.37	18.26	26.79	40.76	52.48	68.83	80.60

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied.

Moreover, Table 11 shows that the share of individuals who are widows/widowers increases with age, for both men and women. Table 11 further shows that there are very strong gender differences in the share of elderly that are married or widowed. While the majority of elderly men are still married at age 75 or above (71.31 percent), this does not hold true for women. ***Women from age 65 onwards are significantly more likely to be widowed than to be married. At age 75 or older, only 16.19 percent of women are still married.*** Several reasons for these strong gender differences exist. Qualitative studies (e.g. Kreager and Schröder-Butterfill, 2008) have pointed out that in some ethnic groups in Indonesia only men are allowed to re-marry in the case of death of their spouse, while women are not. However, the larger reasons for gender differences in the marriage status of elderly are likely to be caused by (a) women having higher life expectancies than men; (b) fewer men available for re-marriage than women, and (c) age differences between men and women in marriages, with men tending to be older than women.

The gender specific differences in the marital status of elderly have repercussions for family arrangements across the larger family network, e.g. children, step-children, extended family or relatives, the decision to split or form a household and several other socio-economic aspects such as healthcare, remittances, and labour supply. Table 12 shows poverty rates by living arrangement. Living arrangements are classified similarly to India (based on the seminal paper of Dreze and Srinivasan 1997). To compare living arrangements, it is useful to classify poverty on a household basis. Table 12 shows in the first two rows the poverty rates for individuals and households in Indonesia. While the

official BPS poverty rates for all individuals, as replicated by TNP2K, are 11.96 percent - the poverty rate for all households is 9.36 percent. This result is very intuitive since poorer households tend to consist of more household members.

Table 12: Poverty rates in Indonesia in 2012 by living arrangements

Category	Share of households (%)	Poverty rate (%)
Individuals		11.96
Households		9.36
Elderly households	100.00	13.22
Single elderly households	3.81	4.22
Single elderly male households	0.80	1.21
Single elderly female households	3.02	5.01
Two elderly person household (husband + spouse)	7.89	10.25
Nuclear elderly household	15.69	9.71
Nuclear elderly household with male elderly	12.21	10.67
Nuclear elderly household with female elderly	5.73	8.81
Extended elderly household	72.67	17.47
Extended elderly household with male elderly	32.90	19.07
Extended elderly household with female elderly	50.99	17.40

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Official BPS poverty lines (rural/urban province level) applied. Survey weights applied. Elderly household is defined as including at least one person with age 65 or older. Nuclear household is defined as household in which elderly person lives only with his child or step-child. Extended family refers to all remaining household arrangements.

Elderly households, here defined as a household with at least one elderly person aged 65 or older, tend to have substantially higher poverty rates (13.22 percent) than found in the overall population (9.36 percent). However, poverty rates for elderly living arrangements differ considerably. Poverty rates among single elderly households (4.22 percent) seem to be much lower compared to other elderly living arrangements, and also compared to the overall poverty figure of 9.36 percent. However, one needs to note that only a small fraction of all elderly (<4 percent) actually live in single person households. The general finding lends weight to the hypothesis that the elderly want to sustain their own household as long as their financial means are sufficient, and only merge into households with their children or other relatives once these means are exhausted. However, household formation processes are very complex in general and are determined by a variety of factors. Moreover, as stated previously, substantial regional differences are also likely to exist. For instance, east Javanese elderly tend to prefer to sustain their own household, while in some Sumatran communities the traditional pattern of elderly forming a multi-generational household seems to be desired by most elderly (Kreager and Schröder-Butterfill, 2008).

Another interesting and policy relevant picture is obtained when one compares the share of elderly persons living with a child, as well the share of children living with an elderly person. Table 13 shows (Columns one through four) that about 50 percent of the elderly live with at least one child. In particular, the poor elderly are more likely to live with children compared to their non-poor counterparts. Looking at the share of children who live with an elderly person, one observes that only

a minority of children live with an elderly person. Even when looking at poor children, only 14 percent live with an elderly person aged 60 years or older, and only about three to four percent of poor children live with an elderly person aged 75 or older. While in poorer households the likelihood to find an elderly person and a child living together increases, it becomes clear that policies that focus only on addressing the needs of children and young families leave a substantial share of poor elderly without any benefit from such policies. On the other hand, policies targeted towards elderly persons, particularly poor elderly persons, have the advantage that children are relatively likely to benefit.

Table 13: Living arrangements elderly-children in Indonesia (2012)

	Share of elderly (%) living with children				Share of children (%) living with elderly			
Category	60+	65+	70+	75+	60+	65+	70+	75+
All	47.73	46.27	45.45	44.91	14.62	10.00	6.35	3.44
Men	48.11	44.42	42.93	41.08	14.65	9.81	6.14	3.28
Poor men	69.84	66.01	62.97	56.55	19.74	14.67	9.41	5.15
Non-poor men	45.10	41.13	39.40	38.24	13.76	8.97	5.57	2.95
Women	47.40	47.78	47.35	47.67	14.59	10.20	6.58	3.62
Poor women	67.21	65.32	62.03	60.37	20.35	14.52	10.21	5.70
Non-poor women	44.57	45.00	44.92	45.49	13.64	9.48	5.98	3.28

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Official BPS poverty lines (rural/urban province level) applied. Poverty rates refer to individuals. Survey weights applied. Child defined as persons below the age of 18.

Robustness of old-age poverty rates

Official poverty rates around the world are usually calculated by using income or (consumption) expenditures as a measure of welfare, with Latin American countries using income and African and Asian countries using (consumption) expenditures. To determine the national poverty line, most countries in the world use an absolute poverty line and determine this line by the so called cost of basic needs (CBN) approach that has been advocated by the World Bank since the 1990s (Ravallion, 1998). The most prominent exceptions are some countries in the European Union with a relative poverty line, or Bhutan with a happiness measure. Indonesia uses a CBN approach together with per-capita consumption expenditures as measures of welfare. The choice of a per-capita measure is not uncontroversial and countries like Argentina, Brazil, and the US and many African countries have chosen to diverge from this practice. The problem with a per-capita measure lies in dividing a household's consumption expenditures by the number of household members. By doing this, BPS assumes that:

a) Children are as needy as adults, and younger adults are as needy as elderly adults; and
b) All households have needs in proportion to the number of household members (Deaton and Paxson, 1995, 1998a).

Although these assumptions are hard to defend, they can only be replaced by another arbitrary set of assumptions (Deaton and Paxson, 1995, 1998a, 1998b; Deaton, 1997) about the detailed consumption needs of children vs. working age adults vs. the elderly and arbitrary assumptions about the degree to which certain consumption categories/items, such as housing, have public goods characteristics (can be shared among several household members).

While national statistical offices and academic studies differ on whether to apply different weights to, for instance, children vs. adults or small vs. large households, it is commonly agreed to test the robustness of poverty estimates against these different assumptions.

The formal representation of this testing is depicted in equation 1, in which the effective expenditure level of an individual i ($E_{i,eff}$) is obtained by dividing nominal household expenditures (E_h) by the effective household size. The effective household size is the sum of the number of adults (n_a) and children (n_c) in a household whereby children receive a weight (w_c) between 0 and 1, depending on their needs compared to adults (adult equivalence scale). The parameter θ represents the assumption made about the role of public goods in household expenditures (economies of scale) and lies between 0 and 1, with 1 indicating that no economies of scale or benefits from public goods items are expected.

$$E_{i,eff} = \frac{E_h}{(n_a + w_c * n_c)^\theta} \quad (1)$$

In order to better understand the role of adult equivalence scales and economies of scale on the measurement of poverty, we follow the specifications in which either only adult equivalence scales or only economies of scales are applied, but not both at the same time (Deaton and Paxton, 1995, 1998a; Dreze and Srinivasan, 1997; Lanjouw et al., 2004). For the adult equivalence scale, we use scenarios in which children needs are assumed to be (w_c) 80 percent or 50 percent less than the needs of adults, with children being defined as individuals below the age of 18. For the economies of scale, we chose values for θ of 0.9 – 0.2, with values of 0.8-0.9 being most discussed as relevant for developing countries[6].

The effect of applying either adult equivalence scales or economies of scale on old-age poverty rates is not a-priori clear. As Table 10 shows, a large share of elderly live in larger households and in households with children. Therefore, the effect of applying the different scales depends on how elderly living arrangements are compared to an average household type (Deaton and Paxson, 1998a). Applying different scales for poverty measures provides policy makers with two main insights:
- How sensitive are old-age poverty rates to assumptions about needs and household sizes?
- What is the relative share of the elderly among the poor, especially when compared to children?

Adult equivalence scales

Table 14 shows results using different assumptions about the relative weights of children. The baseline BPS scenario is repeated with w_c=1. Assuming that children are moderately less needy than adults (0.8), the results show that old-age poverty rates will be much higher than usually conferred by BPS statistics. Assuming that children have a weight of half an adult (0.5) old-age poverty rates increase even further.

[6] To derive poverty estimates the poverty lines are adjusted in such a way that it leaves the poverty level of the average household type unaffected by the particular assumption about adult equivalence scales or economies of scale. The adjustment of the poverty lines follows Dreze and Srinivasan (1997) for the adult equivalence scales and Lanjouw and Ravallion (1995) for the economies of scale scenarios. A typical household is defined for 2012 as one with two adults and two children (adult equivalence scales) or one with household size 3.9 (economies of scale). The values were determined empirically from Susenas 2012 March data.

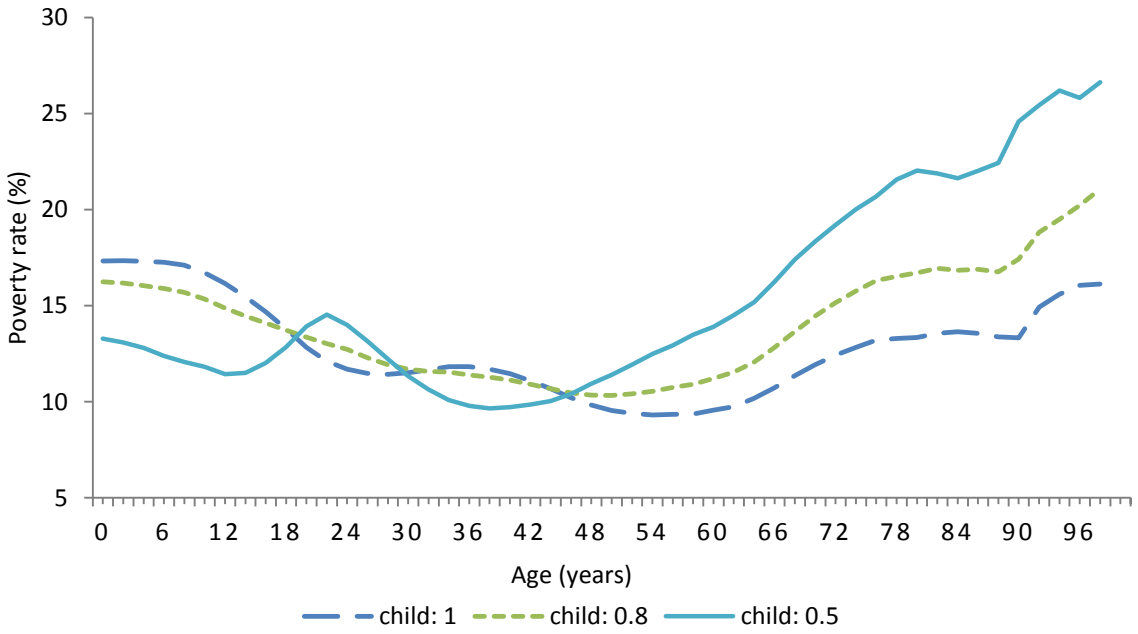
Table 14: Poverty rates and adult equivalence scales in Indonesia in 2012

	Poverty rate (%)		
Category	w_c: 1	w_c: 0.8	w_c: 0.5
Total	11.96	12.29	12.01
Elderly 60+	12.35	15.20	19.13
Elderly 65+	13.48	16.62	20.90
Elderly 70+	14.57	18.23	22.75
Elderly 75+	15.01	18.77	23.72

Note: Calculations by TNP2K based on Susenas 2012 (March). Official BPS poverty lines (rural/urban province level) applied. Poverty rates refer to individuals. Survey weights applied. Children are defined as individuals below age 18.

Figure 9 further illustrates the relative share of the elderly among all age groups. The official BPS procedure (dashed blue line) shows a clear age-poverty relationship with children being the poorest age group followed by the elderly. Using moderate assumptions (dashed green line) about the relative needs of children with respect to adults already changes this picture with the elderly becoming the relatively poorest population sub-group in Indonesia. Assuming that children have about half the expenditure needs of adults (solid blue line) further increases this conclusion.

Figure 9: Poverty rates and age in Indonesia, adult equivalence scales (2012)



Source: Susenas 2012 round (March)

Economies of scale

The results of making changes to assumptions on the role of public goods and household consumption expenditures (economies of scale), but giving children an equal weight compared to adults are depicted in Table 15.

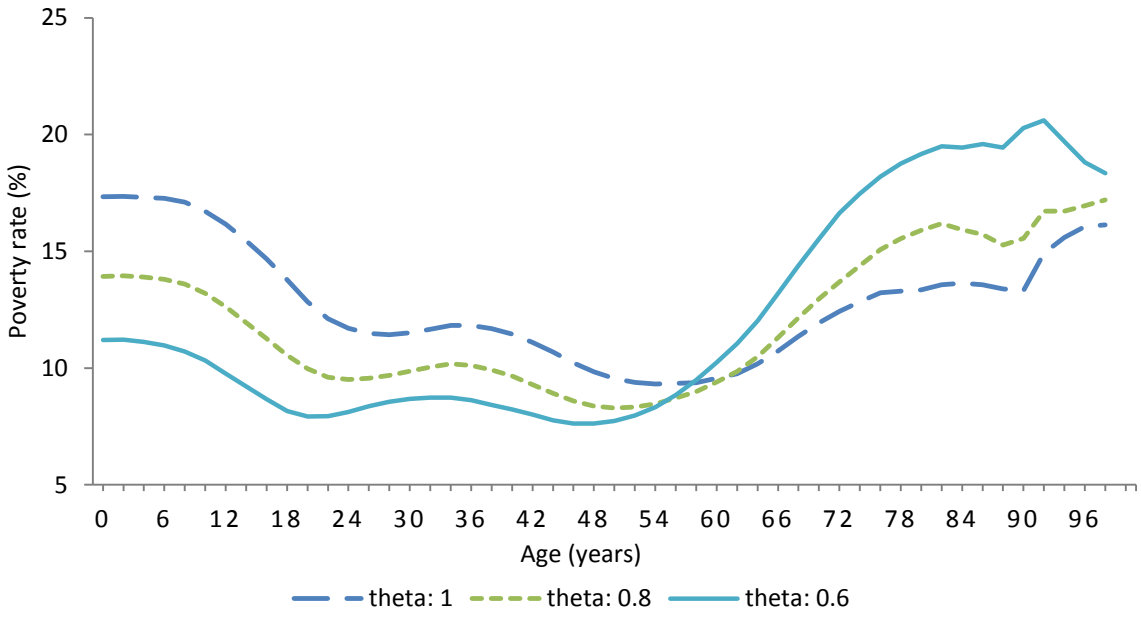
Table 15: Poverty rates and economies of scale in Indonesia (2012)

	Poverty rates (%)				
θ	Total	Elderly 60+	Elderly 65+	Elderly 70+	Elderly 75+
1	11.96	12.35	13.48	14.57	15.01
0.9	11.06	12.75	13.99	15.42	16.32
0.8	10.09	13.36	14.94	16.45	17.30
0.7	9.30	14.24	15.97	17.72	18.63
0.6	8.95	15.78	17.69	19.68	20.55
0.5	8.64	17.34	19.66	21.88	23.12
0.4	8.52	18.96	21.34	23.65	24.96
0.3	8.62	20.89	23.44	26.08	27.05
0.2	8.79	22.70	25.50	28.31	29.62

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Official BPS poverty lines (rural/urban province level) applied. Poverty rates refer to individuals. Survey weights applied.

Assuming values of θ=0.9 or 0.8 increases old-age poverty rates quite significantly and underlines the sensitivity of old-age poverty estimates on the way poverty is measured. Figure 10 shows the age-poverty relationship with the dashed blue line showing the BPS scenario. Similar to the case of adult equivalence scales, one finds a strong shift in the relative share of the poor towards elderly people and away from children. ***The elderly are found to be the poorest population sub-group when economies of scale are used.***

Figure 10: Poverty rate and age in Indonesia, economies of scale (2012)



Source: Susenas 2012 round (March)

Allowing for adult equivalence scales or economies of scale in the measure of poverty has strong effects on the absolute number of poor elderly and on the relative share of the elderly among the poor. These results are in line with earlier findings from measurements of old-age poverty in countries such as Ghana, Korea, South Africa and Ukraine, and are very sensitive to assumptions about the

relative cost of children and public goods in household consumption (Deaton and Paxton, 1995, 1998a; Lanjouw et al., 2004).

Poverty rates among the elderly in Indonesia are already very high compared to the non-elderly population. Adopting a perspective such as those in statistical offices in Argentina, Brazil, the U.S. or most African countries; namely that children are not as costly as adults or assuming that certain household expenditures have a larger public good character (taking the perspective that per-capita measures are biased towards child poverty), leads to the elderly becoming the population group with the highest poverty rates in Indonesia.

The results seem plausible taking into account that the elderly in Indonesia, in the absence of any significant coverage, need to finance their expenditures by mainly relying on working until old age, using their savings and receiving support from family networks.

Socio-economic characteristics of the elderly

Education

Following the famous large-scale expansion of primary schools in Indonesia, starting in 1973 under the "*Sekolah Dasar* INPRES programme" (Duflo, 2001), literacy and primary school enrolment rates increased significantly. For the first time, a majority of Indonesians, especially those in rural areas, were able to access basic education. However, the current generation of elderly were not able to benefit from this large-scale roll out of primary schools. Table 16 depicts literacy rates of different age groups in Indonesia, calculated from the annual Susenas rounds. Literacy rates among the younger generation (18-34) are close to 100 percent and one can observe a clear cohort effect in the data. In the age groups older than 70 years, only half of the people are literate. However, even during the short period of 2005-2012, one can observe that across all elderly age groups significant progress in access to education has been made with more literate elderly persons entering these age groups.

Table 16: Literacy rates (%) in Indonesia (2005 – 2012)

	Age group (years)						
Year	Total	18-34	35-59	60-64	65-69	70-74	75+
2005	88.50	97.64	87.64	65.04	56.02	51.24	43.60
2006	88.91	97.91	89.01	67.06	59.37	53.02	48.52
2007	89.40	97.98	88.92	74.20	67.75	55.94	49.07
2008	90.80	98.97	91.07	72.68	66.00	52.54	45.80
2009	89.29	98.84	89.81	68.75	61.35	49.50	40.95
2010	89.40	97.94	89.55	74.29	68.30	56.99	47.57
2011	90.77	97.85	90.08	75.83	69.48	57.62	46.71
2012	91.68	98.19	91.55	77.20	71.47	58.94	46.61

Source: Calculations by TNP2K based on annual Susenas rounds (March).
Note: Literacy rate is defined as being literate in the Latin alphabet. Survey weights applied.

Table 17: Literacy rates in Indonesia by gender (2005 – 2012)

	Literacy rates (%)							
	Men (years)				Women (years)			
Year	60-64	65-69	70-74	75+	60-64	65-69	70-74	75+
2005	80.17	73.70	67.49	65.28	50.12	43.03	35.15	25.58
2006	81.56	77.87	68.50	65.62	53.83	43.90	38.47	33.44
2007	84.88	82.55	71.02	66.50	64.18	54.38	42.66	35.56
2008	84.87	81.02	72.01	64.32	61.05	52.73	37.09	30.42
2009	84.42	82.61	71.89	60.24	54.12	41.26	31.16	24.88
2010	85.33	83.31	74.25	64.44	63.61	54.55	42.11	33.92
2011	87.20	82.94	75.62	67.63	65.19	57.34	43.30	31.60
2012	86.34	84.79	76.39	64.85	68.64	59.45	45.04	33.47

Source: Calculations by TNP2K based on annual Susenas rounds (March).
Note: Literacy rate is defined as being literate in Latin alphabet. Survey weights applied.

Disaggregating literacy figures among the elderly by gender shows remarkable differences between men and women. Literacy rates among elderly women are far lower than those of elderly men. However, for both men and women one observes general improvements in literacy rates over the period 2005-2012 with the improvements being particularly strong for women.

Another interesting aspect is the difference in literacy patterns between rural and urban areas. As is expected, literacy rates are substantially higher among the elderly residing in urban areas, most likely due to a better supply of schools in urban areas when the current generation of elderly were students, as well as to education specific migration patterns with better educated rural persons finding it easier to get jobs in urban areas. ***While literacy rates among all elderly age groups improved in urban areas, little progress was observed in rural areas in the 70-74 and 75+ age groups.*** However, the data indicates that more and more literate elderly will enter these age groups in the future.

Table 18: Literacy rates (%) in Indonesia (2005 – 2012)

	Age group (years)							
	Urban				Rural			
Year	60-64	65-69	70-74	75+	60-64	65-69	70-74	75+
2005	78.53	66.81	64.30	47.39	56.52	48.72	43.27	40.88
2006	79.18	72.14	62.69	59.79	57.04	50.98	46.26	40.16
2007	84.61	78.79	65.54	58.81	67.76	61.25	50.66	43.77
2008	81.94	76.96	63.31	55.45	65.32	57.46	44.83	39.18
2009	81.96	76.67	63.56	52.68	58.29	49.14	38.97	32.64
2010	84.15	79.07	68.26	58.23	66.07	59.57	48.30	39.88
2011	83.98	77.44	65.35	54.93	67.82	61.67	50.15	38.89
2012	84.42	79.10	69.88	54.57	70.10	63.99	48.37	39.05

Source: Calculations by TNP2K based on annual Susenas rounds (March).
Note: Literacy rate is defined as being literate in Latin alphabet. Survey weights applied.

Literacy levels are an important indicator for educational achievements, the design of policies and education qualifications. Table 19 tabulates the share of completed educational degrees among the elderly (60+) vs. working age population (18-59 years). A significant share of the elderly, about 60 percent of those aged 60 years or older, do not possess any schooling qualifications, although this share is decreasing over time. In general, these findings are in line with the trend of literacy rates above.

Table 19: Highest education degree obtained (share of individuals, %) in Indonesia (2005 – 2012)

	Age 18-59 years				Age 60+			
Year	No primary	Primary	Junior high	Senior high or higher	No primary	Primary	Junior high	Senior high or higher
2005	20.63	33.31	18.35	27.71	70.75	19.58	4.88	4.79
2006	19.99	32.68	17.84	29.49	67.31	21.06	5.32	6.31
2007	24.30	29.24	17.05	29.41	68.92	18.99	4.96	7.13
2008	21.89	27.97	17.22	32.92	67.21	18.69	5.61	8.49
2009	20.67	28.39	17.87	33.07	64.51	20.14	6.04	9.32
2010	20.02	28.16	18.09	33.73	62.03	21.35	6.46	10.16
2011	17.83	28.41	19.53	34.22	61.81	22.72	5.95	9.52
2012	16.50	28.62	19.58	35.30	59.87	23.54	6.62	9.97

Source: Calculations by TNP2K based on annual Susenas rounds (March).
Note: Survey weights applied.

Similar to the analysis of literacy rates there are sizeable differences by gender and by rural-urban status. As Table 20 shows, there is more than a 20 percentage point difference between those elderly men and women who have no primary school qualifications. However, for both men and women, the share of persons with at least a primary school qualification increased during 2005-2012. In general, men tend to have the largest share of each single education category, but women tend to catch up.

Table 20: Highest education degree obtained among elderly (60+) (share of individuals, %) in Indonesia (2005 – 2012)

	Men				Women			
Year	No primary	Primary	Junior high	Senior high or higher	No primary	Primary	Junior high	Senior high or higher
2005	58.47	26.9	7.30	7.33	81.67	13.07	2.73	2.53
2006	55.50	28.44	7.09	8.98	77.85	14.49	3.74	3.92
2007	57.20	25.09	6.96	10.75	79.24	13.62	3.20	3.94
2008	54.87	24.70	7.30	13.13	78.02	13.43	4.12	4.43
2009	53.03	25.46	7.75	13.75	74.72	15.41	4.51	5.36
2010	50.24	26.64	8.19	14.94	72.61	16.61	4.91	5.87
2011	49.09	28.98	7.60	14.33	72.63	17.40	4.55	5.42
2012	47.88	29.05	8.47	14.59	70.08	18.85	5.04	6.03

Source: Calculations by TNP2K based on annual Susenas rounds (March).
Note: Survey weights applied.

Table 21: Highest education degree obtained among elderly (60+) (share of individuals, %) in Indonesia (2005 – 2012)

	Urban				Rural			
Year	No primary	Primary	Junior high	Senior high or higher	No primary	Primary	Junior high	Senior high or higher
2005	58.18	23.23	9.24	9.36	78.96	17.2	2.04	1.81
2006	53.43	24.81	9.55	12.21	77.55	18.30	2.20	1.95
2007	52.78	22.89	9.13	15.19	78.29	16.72	2.54	2.44
2008	52.80	21.61	9.69	15.91	78.03	16.50	2.55	2.92
2009	50.09	22.36	10.23	17.32	75.55	18.44	2.82	3.18
2010	46.99	23.60	10.83	18.59	73.91	19.58	3.01	3.49
2011	50.65	24.17	9.07	16.11	72.66	21.31	2.92	3.12
2012	49.18	25.00	8.97	16.85	70.27	22.13	4.33	3.27

Source: Calculations by TNP2K based on annual Susenas rounds (March).
Note: Survey weights applied.

At the rural-urban level, a similar pattern emerges. Individuals in urban areas tend to have much higher education levels. While education-specific migration patterns might play a role in this, it is generally safe to assume that better access and better financial means in urban areas have led to higher numbers of elderly persons having some sort of education qualification. Despite improvements over the period 2005-2012, about 70 percent of persons aged 60 or above reported no education qualification in rural areas in 2012. While the gaps between gender and between rural-urban areas seem to follow a similar trend, it is worth noting that while women tend to catch up with men across all education categories, including senior high schools, the same is not true for higher level education degrees in rural areas. ***The share of elderly people who hold at least a senior high school degree has***

been growing very moderately in rural areas to about three percent in 2012, but is still at very low levels among the elderly.

Health

Health problems are known to increase with old age and health-related expenditures present a significant burden for the elderly. For some elderly, especially the poor elderly, health costs are often unafforadable with the consequence that certain medical procedures cannot be undertaken and drugs cannot be obtained.

Table 22: Disability in Indonesia (2010)

		Age (years)					
		10-20	20-60	60-75	65-70	70-75	75+
Number of individuals		43,164,000	129,642,795	6,052,000	4,690,000	3,454,000	3,832,000
Seeing problems (%)	Little	0.18	1.86	10.39	13.12	18.28	24.76
	Serious	0.04	0.11	0.71	1.13	2.05	4.6
Hearing problems (%)	Little	0.08	0.42	4.58	7.56	13.88	23.02
	Serious	0.06	0.09	0.48	0.83	1.75	4.69
Walking problems (%)	Little	0.09	0.44	4.30	6.96	12.54	21.02
	Serious	0.09	0.15	0.82	1.34	2.43	6.06
Concentration problems (%)	Little	0.26	0.45	3.10	5.08	9.62	17.37
	Serious	0.18	0.22	0.47	0.70	1.35	3.79
Self-care problems (%)	Little	0.34	0.28	2.00	3.35	6.68	12.99
	Serious	0.13	0.13	0.55	0.89	1.66	4.49

Source: BPS Census 2010

Elderly people are more likely to suffer from disabilities and chronic health problems than the non-elderly population. Analysing disability data from the 2010 Population Census, Table 22 shows that a significant share (about two percent to 30 percent) of the population aged 60 and older reported suffering from some sort of problem relating to seeing, hearing, walking, concentrating or being able to take care of themselves. As one would expect, the data shows a strong age gradient with incidence of health problems.

In addition to the BPS Census 2010 data, Susenas data allows for an analysis of general health problems as well as the treatments and expenditure patterns of the population, including the elderly. Table 23 depicts health problems that Indonesians commonly face[7]. Children and the elderly are found to be the population group most affected by health problems. While typical illnesses of children include fever and flu, the elderly seem to suffer particularly from coughs, asthma, headaches and illnesses reported in the 'other category'. This pattern is observed among both men and women.

[7] Susenas does not collect information on disability. In Indonesia the Census 2010 and the Riskesdas 2007 are the latest data sources with disaggregated data on disability. Both data sets confirm and illustrate that disability prevalence strongly increases at old age.

Table 23: Self-reported prevalence of sickness in Indonesia (2012)

	Self-reported prevalence (%)							
	Men (years)				Women (years)			
Type	Total	<18	18-59	60+	Total	<18	18-59	60+
Fever	11.44	17.34	8.09	9.07	10.83	17.09	7.3	9.93
Cough	14.91	18.69	12.05	19.37	14.04	18.56	10.95	17.24
Flu	14.12	18.97	11.35	12.43	13.82	19.23	10.95	11.76
Asthma	1.32	0.70	1.10	6.25	1.36	0.73	1.19	5.13
Diarrhoea	1.27	1.59	1.06	1.39	1.27	1.60	1.02	1.71
Headache	3.89	1.72	4.76	7.83	5.33	1.92	6.56	10.77
Toothache	1.48	1.14	1.69	1.41	1.55	1.18	1.82	1.14
Other	9.23	4.61	9.57	30.10	11.21	5.04	11.45	34.87

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied. Questions relate to reported health problems in the last month from the date of interview.

Re-analysing old-age health patterns from a poverty angle yields interesting results. While it is clear that having sufficient financial means is beneficial for getting treatment for certain diseases, in order to prevent chronic diseases and mortality it is not automatically clear whether a higher socio-economic status helps elderly to suffer less from diseases. While the demographic and health economics literature has found relatively strong evidence for Indonesia that poorer children are more likely to suffer from diseases (Cameron and Williams, 2009), this pattern is less clear for the elderly. As discussed in various articles, such as in Beckett (2000), in several OECD countries the rates of sickness among rich and poor elderly seem to be quite similar and even more similar than among any other age group. The authors reason that at old age, poorer individuals for the first time get access to certain public social assistance programmes, such as pensions or free health care in some countries, thereby narrowing the gap. However, the evidence is very country specific with an increase in disparities in health status among the elderly being reported in studies that claim that the poor elderly have clearly worse health conditions than the non-poor elderly (Dupre, 2008).

For developing countries, none or very little evidence exists on sickness rates among the elderly by socio-economic status. Interpretation of results in this context becomes more difficult since poverty-related survival rates (Cameron and Williams, 2009; Banerjee and Duflo, 2010) tend to understate the health problems among the poor elderly. Likewise, the reporting of health problems can be very subjective and people that have grown up without established links over their life-course to formalised medication services, such as hospitals etc., tend to underreport sicknesses. This includes parts of rural populations or individuals who grew up decades ago when only a small share of the population had access to formal health services.

Table 24 shows the reported sickness rates disaggregated among the poor and non-poor elderly (60 years and above) according to BPS's poverty definition. Interestingly, non-poor individuals show slightly higher sickness rates than the poor, both for men and women. Among the listed health problems, asthma is the only one that can be classified as a chronic disease. Both poor men and women show slightly higher health problems in asthma than their counterparts, which might stem from poverty manifesting itself in chronic diseases rather than in acute health problems.

Table 24: Self-reported prevalence of sickness among the elderly in Indonesia (2012)

	Self-reported prevalence of sickness (%)					
	Men			Women		
Type	Total	Poor	Non-poor	Total	Poor	Non-poor
Fever	9.07	7.83	9.25	9.93	9.03	10.06
Cough	19.37	17.34	19.66	17.24	16.13	17.40
Flu	12.43	8.67	12.96	11.76	9.57	12.07
Asthma	6.25	7.72	6.05	5.13	6.41	4.95
Diarrhoea	1.39	0.70	1.48	1.71	1.10	1.80
Headache	7.83	6.96	7.95	10.77	11.07	10.72
Toothache	1.41	1.14	1.44	1.14	0.69	1.21
Other	30.10	28.88	30.27	34.87	30.25	35.53

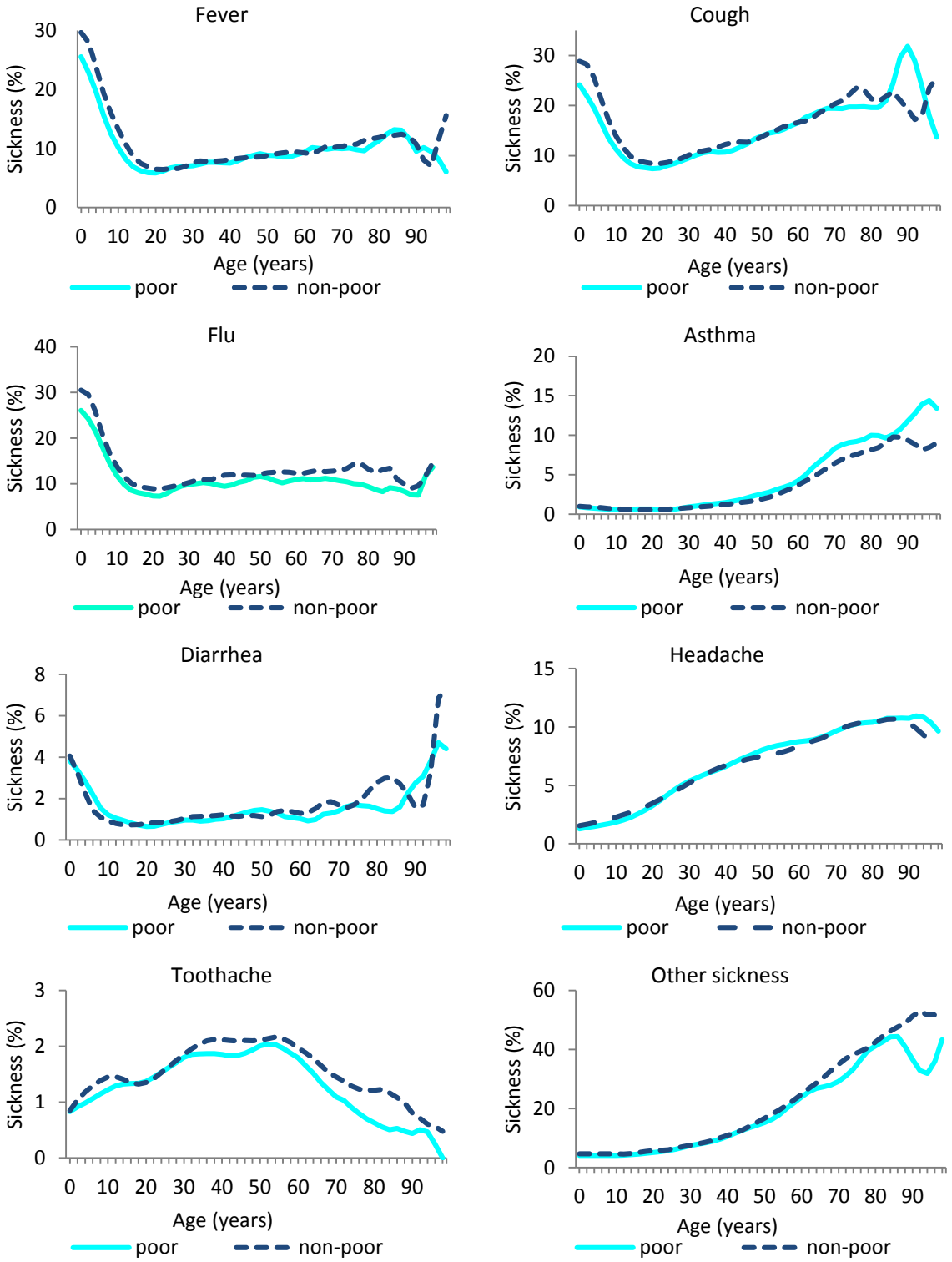
Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied. Questions relate to reported health problems in the last month from the date of interview. Elderly is defined as being 60 years or older.

Figure 11 provides a visualisation of the reported age-sickness relationship separately for poor and non-poor individuals for all ages. In line with Table 22, Table 23 and Table 24 they show a clear age gradient among the different health problems with some health problems being particularly observed among children (fever, flu) and others being particularly associated with old age (asthma, head ache, other sickness). For all health problems (except for tooth aches) there is a clear age-gradient showing a ***significant increase in sickness the older a person becomes.***

As shown previously, the elderly are much more likely to suffer from a variety of health problems compared to the rest of the population, the exception being children for certain sicknesses. Because of the extent and the types of diseases the elderly suffer, the healthcare utilisation behaviour of the elderly is likely to be very different than that of the rest of population. Furthermore, the elderly are more likely to go to traditional practitioners than younger population groups.

Table 25 and Table 26 show the usage of outpatient and inpatient treatment for different age groups. Nearly 50 percent of elderly men and women reported having been an outpatient in the last month, while about four percent of the elderly reported having been taken for inpatient treatment for at least one day during the last 12 months. For outpatient treatment, children and the elderly are the groups most often taken for treatment, while the elderly in particular need inpatient treatment, which suggests that the elderly are more likely to suffer from severe health problems than children or adults between 18 and 59 years.

Figure 11: Poverty and reported health problems in Indonesia (2012)



Source: Calculations by TNP2K based on Susenas 2012 (March).
Note: Survey weights applied.

Table 25: Self-reported outpatient treatment over last month (%) in Indonesia (2012)

	Age group (years)							
	Men				Women			
Type	Total	<18	18-59	60+	Total	<18	18-59	60+
Outpatient (yes=1, no=0)	43.39	49.91	38.12	46.96	45.7	49.95	42.37	48.43
If outpatient patient=1 treatment was in/by								
Government hospital	5.99	3.92	6.85	9.59	5.44	3.66	6.35	6.71
Private hospital	5.03	4.39	5.24	6.35	4.77	4.27	5.21	4.55
Medical practitioner	31.67	28.39	34.83	30.87	29.32	28.6	30.23	28.04
Puskesmas	32.49	37.25	28.97	29.8	35.86	37.39	35.42	33.62
Health worker	29.3	30.38	28.03	30.4	28.87	30.42	26.83	31.89
Traditional practitioner	2.47	1.55	3.11	3.15	2.29	1.78	2.59	2.53
Birth attendant	0.72	0.67	0.79	0.63	0.71	0.91	0.66	0.38
Other	2.51	1.95	3.07	2.34	2.46	2.01	2.55	3.23

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied.

Table 26: Self-reported inpatient treatment over last year (%) in Indonesia (2012)

	Age group (years)							
	Men				Women			
Type	Total	<18	18-59	60+	Total	<18	18-59	60+
Inpatient yes=1, no=0)	1.65	1.33	1.5	4.53	2.2	1.29	2.57	3.35
If inpatient patient=1 treatment was in/by								
Government hospital	48.52	46.08	48.48	52.32	41.47	40.52	40.99	45.6
Private hospital	34.49	31.81	35.65	35.34	35.22	40.03	34.58	31.03
Puskesmas	13.56	13.19	13.73	13.64	13.67	12.57	12.69	20.71
Health worker	4.45	8.64	3.31	1.25	10.69	7.71	12.44	5.94
Traditional practitioner	0.87	0.93	0.88	0.77	0.67	0.2	0.62	1.66
Other	1.49	1.71	1.42	1.36	1.86	1.1	1.98	2.45

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied.

In line with earlier results on the condition of being an outpatient or inpatient, the elderly seem to be more likely to be referred to/seek health services at hospitals (government and private). This difference is particularly pronounced for inpatient health services.

There are remarkable differences in the healthcare seeking behaviours among the poor and the richer elderly in Indonesia, as depicted in Table 27 and Table 28. While reported rates of sickness between poor and non-poor elderly are relatively similar, ***poorer elderly are significantly less likely to seek either outpatient or inpatient treatment***, both for men and women. Besides differences in whether the elderly use inpatient or outpatient health services, there are strong differences between poor and non-poor elderly in the kind of healthcare providers they use at outpatient or inpatient facilities. ***Poorer elderly are more likely to use government or public health facilities while the non-poor elderly tend to use a private health facility***. Furthermore, there are notable gender differences.

Poor women, in contrast to richer women, are almost never taken to a private healthcare provider for either outpatient or inpatient treatment.

Table 27: Self-reported outpatient treatment among the elderly over last month (%) in Indonesia (2012)

	Elderly men			Elderly women		
Type	Total	Poor	Non-poor	Total	Poor	Non-poor
Outpatient (yes=1, no=0)	46.96	36.12	48.34	48.43	38.87	49.66
If outpatient=1 treatment was in/by						
Government hospital	9.59	3.41	10.18	6.71	2.75	7.10
Private hospital	6.35	2.35	6.73	4.55	0.13	4.99
Medical practitioner	30.87	18.52	32.04	28.04	19.91	28.85
Puskesmas	29.80	44.83	28.37	33.62	43.53	32.62
Health worker	30.40	32.84	30.17	31.89	33.71	31.71
Traditional practitioner	3.15	5.44	2.93	2.53	1.27	2.66
Birth attendant	0.63	0.69	0.62	0.38	0.10	0.41
Other	2.34	4.12	2.18	3.23	3.54	3.19

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied. Elderly is defined as being 60 years or older.

Table 28: Self-reported inpatient treatment among the elderly over last year (%) in Indonesia (2012)

	Elderly men			Elderly women		
Type	Total	Poor	Non-poor	Total	Poor	Non-poor
Inpatient (yes=1, no=0)	4.53	2.76	4.77	3.35	1.96	3.54
If inpatient=1 treatment was in:						
Government hospital	52.32	61.88	51.56	45.60	52.62	45.05
Private hospital	35.34	17.37	36.77	31.03	1.72	33.34
Puskesmas	13.64	25.71	12.68	20.71	45.04	18.79
Health worker	1.25	0.00	1.35	5.94	0.62	6.36
Traditional practitioner	0.77	0.00	0.83	1.66	0.00	1.79
Other	1.36	0.00	1.47	2.45	0.00	2.64

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied.

The previous results on age and health are reflected in household expenditure patterns. Table 29 shows household expenditures based on whether a household comprises at least one person age 60 or above. The expenditure patterns show that ***elderly households devote on average between seven and eight percent of their total non-food expenditures on health expenditures, compared to approximately five percent of non-elderly households.*** If a household reports any sort of inpatient or outpatient treatment over the respective recall period, this share increases to 11.38 percent for elderly households vs. 8.20 percent in non-elderly households. As expected, elderly households face substantial health costs[8].

[8] Another reason why old age poverty rates are usually underestimated relates to the CBN approach that BPS adopted to measure poverty which interprets expenditures on health as welfare improvements. This leads to the paradoxical result that

Table 29: Health expenditure patterns among elderly and non-elderly households in Indonesia (2012)

	Elderly			Non-elderly		
	Health spending (Rp, month)	Share of health exp. in total exp.	Share of health exp. in total non-food exp.	Health spending (Rp, month)	Share of health exp. in total exp.	Share of health exp. in total non-food exp.
Complete sample	109,612	3.36%	7.57%	80,811	2.24%	5.13%
If household reported inpatient or outpatient treatment	187,143	5.31%	11.38%	152,105	3.80%	8.20%

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied. Reported expenditure level is on the household level. Elderly household is defined as household with at least one person being 60 years or above.

The descriptive results in Table 29 show that poor elderly are less likely to seek outpatient or inpatient treatment when sick, and if they utilise outpatient/inpatient treatment they receive services from less expensive healthcare providers. This observation, together with poorer households having fewer resources to spend on healthcare, leads one to expect in absolute terms that poorer households will spend less on healthcare. Table 30 shows that this is the case. Poor households with an elderly person spend on average only about one-ninth of what non-poor elderly households spend. For both poor and non-poor households, health expenditures are a substantial part of overall and of reported non-food household expenditures. Interestingly, even in relative terms (health expenditures out of total (non-food) expenditures), non-poor elderly households spend more on healthcare than poor elderly households. Since food expenditures represent a large share of overall household expenditures among the poor, the results might underscore that ***poorer households have significant less means to spend on healthcare even in the case of sickness.***

Table 30: Health expenditure patterns among elderly households in Indonesia (2012)

	Poor elderly			Non-poor elderly		
	Health spending (Rp, month)	Share of health exp. in total exp.	Share of health exp. in total non-food exp.	Health spending (Rp, month)	Share of health exp. in total exp.	Share of health exp. in total non-food exp.
Complete sample	17,177	1.85%	5.74%	121,937.60	3.57%	7.81%
If household reported inpatient or outpatient treatment	24,835	2.59%	8.07%	205,942.10	5.62%	11.76%

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied. Reported expenditure level is on the household level. Elderly household is defined as household with at least one person being 60 years or above.

a household can be classified as non-poor instead of being poor just because it incurs health expenditures for a sick member compared to the situation where no one is sick in the same household. Since this argument affects to a larger extent elderly households, old age poverty rates tend to be underestimated.

Labour

Little is known about the labour supply of the elderly in Indonesia. The main reason for this is that academic research[9], as well as the official BPS and ILO statistics on Indonesia, tends to focus exclusively on the pre-defined working age population which is the age group 14-60 years in Indonesia. Some reports calculate youth or child labour statistics, but labour market information on the elderly is in general not included in these reports.

While official labour statistics pay little attention to the old-age labour supply, analysing the work and labour behaviour of the elderly is of interest for a variety of reasons. First of all, the elderly present an increasing share of the overall labour force due to the ageing of Indonesian society. Secondly, the design of any sort of public policy on pensions and retirement ages needs to take old-age labour supply into account. Thirdly, it is important to understand the motivations of the working elderly (such as income need, poverty, feelings of usefulness to the family) in order to design appropriate policies.

Table 31 shows labour market statistics for various age groups separated for men and women in Indonesia. As one would expect, the share of persons working for pay – either as an employee or self-employed – is highest among the working age groups, defined here as 18-34 and 34-59 years for both men and women. While men are almost exclusively found in the "work for pay" category,[10] domestic work is the major employment category for women – although to some extent this category is affected by women working in rural areas often being classified as domestic workers while, in fact, they are actively involved in manual field work. However, the broad statements are unaffected by these anomalies. The employment pattern seems to be along gender lines with grandmothers providing family support by helping to care for children. In general, the results demonstrate that a large share of elderly persons, especially elderly men are still active in the labour market. However, as the data shows, they tend to work slightly less days and hours per week than persons in younger age groups.

Table 31: Labour statistics for Indonesia (2012)

Indicator	Age groups (years)							
	Men				Women			
	Total	18-34	35-59	60+	Total	18-34	35-59	60+
Work for pay (%)	56.6	84.56	95.15	63.95	26.12	36.58	45.49	24.41
Work for pay or domestic work (%)	58.57	86.72	96.79	73.19	62.89	92.98	98.66	80.48
Searching for work in last week (%)	4.62	8.59	3.19	1.16	2.26	4.09	1.46	0.46
Days worked in last week if work for pay	5.85	5.83	5.9	5.71	5.81	5.81	5.86	5.45
Hours worked in last week if work for pay	42.96	43.82	43.66	35.71	40.33	41.82	40.1	33.14
Days worked in last week if work for pay or domestic work	5.84	5.82	5.89	5.69	5.7	5.71	5.73	5.35
Hours worked in last week if work for pay or domestic work	42.79	43.72	43.56	35.32	37.07	38.6	36.82	30.3

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied.

[9] The exceptions are Cameron and Cobb-Clark (2002, 2008) who investigate whether family transfers have an effect (crowding-out) on old-age labour supply.
[10] 'Work for pay' includes wage and self-employment.

Table 32 and Table 33 present labour market statistics further disaggregated by old age groups and gender. Table 32 depicts labour market statistics for men. ***A large share of the elderly still works at very old age. Even in the group of aged 75 or above, more than one-third report to be working. If one includes domestic work, this figure increases to above 50 percent.*** The table further shows that among the elderly, both the share of elderly working as well as the number of days per week and the number of hours worked per week reduces as a person becomes older.

Similarly, a majority of women still work in their old age, with the trend declining the older a woman becomes. While women are mainly engaged in domestic work, a large number of women work for pay (more than one-quarter of women aged 60-70 years work for pay).

Table 32: Labour statistics for men in Indonesia (2012)

	Age groups (years)					
Indicator	18-34	34-59	60-64	65-69	70-74	75+
Work for pay (%)	81.89	95.15	78.17	69.08	56.32	38.15
Work for pay or domestic work (%)	84.13	96.79	85.58	77.24	66.73	51.09
Searching for work in last week (%)	8.63	3.19	1.9	0.83	0.82	0.61
Days worked in last week if work for pay	5.83	5.9	5.84	5.68	5.53	5.53
Hours worked in last week if work for pay	43.72	43.66	38.13	35.95	32.96	29.89
Days worked in last week if work for pay or domestic work	5.82	5.9	5.83	5.67	5.52	5.48
Hours worked in last week if work for pay or domestic work	43.61	43.56	37.82	35.66	32.56	29.26

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied.

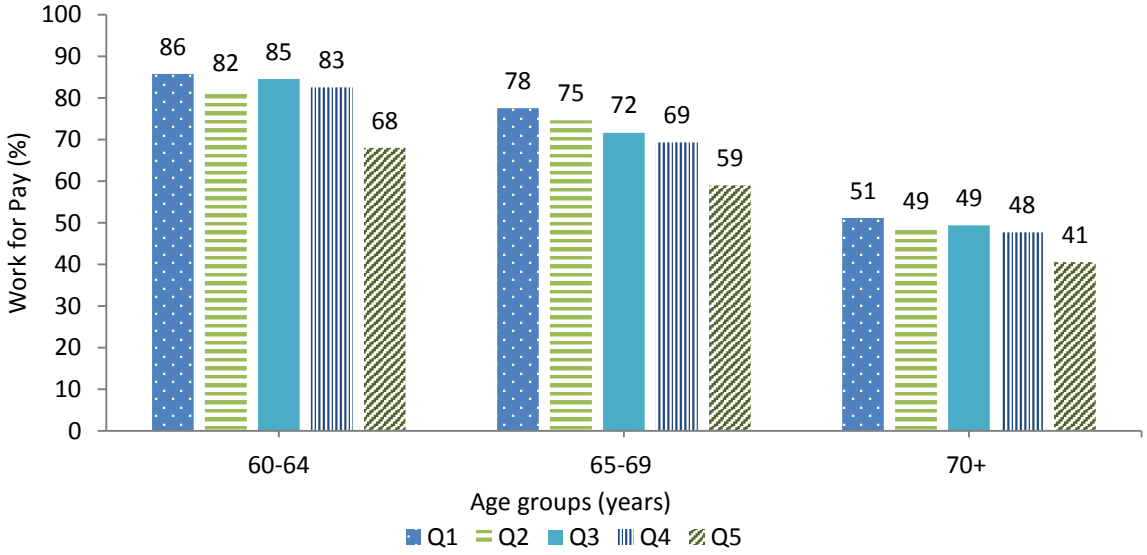
Table 33: Labour statistics for women in Indonesia (2012)

Indicator	Age groups (years)					
	18-34	34-59	60-64	65-69	70-74	75+
Work for pay (%)	35.76	45.49	34.31	28.7	19.2	10.22
Work for pay or domestic work (%)	90.71	98.66	93.69	86.79	77.28	57.66
Searching for work in last week (%)	4.24	1.46	0.84	0.53	0.15	0.14
Days worked in last week if work for pay	5.8	5.86	5.56	5.38	5.21	5.57
Hours worked in last week if work for pay	41.9	40.1	35.3	32.24	29.95	30.97
Days worked in last week if work for pay or domestic work	5.71	5.73	5.43	5.26	5.22	5.45
Hours worked in last week if work for pay or domestic work	38.69	36.82	32.22	29.57	27.65	27.81

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied.

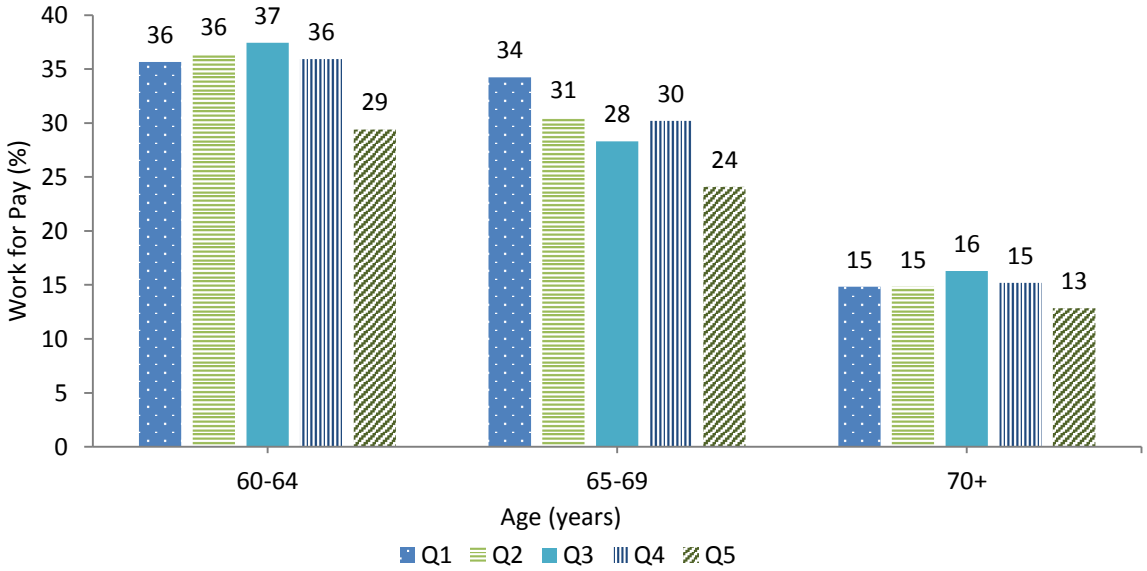
Further analysing men's and women's labour supply (work for pay) by expenditure quintiles (quintile 1 refers to the poorest 20 percent of elderly in a particular age group) shows that **old-age labour supply is highest among the poorest group of elderly** (Figure 12 and Figure 13). This observation supports the hypothesis that work at old age is related to the immediate need to finance basic expenditures, and that the elderly would instead prefer to reduce their labour efforts. While labour supply of men at prime age (between 18 and 60 years) is nearly 100 percent, the data suggests that wealthier elderly are more likely to be able to afford an early retirement. A similar pattern – although at lower levels (share of women working for pay) – can be observed for women, even though the income gradient is less pronounced than for men.

Figure 12: Expenditure quintiles and work among elderly men in Indonesia (2012)



Source: Susenas 2012 round (March)
Note: Q1 refers to the poorest expenditure quintile

Figure 13: Expenditure quintiles and work among elderly women in Indonesia (2012)



Source: Susenas 2012 round (March)
Note: Q1 refers to the poorest expenditure quintile

Pension coverage and inter-household transfers

Among the current generation of elderly, formal pension coverage is very low. As discussed in more detail in chapters three and four, the vast majority of the elderly in Indonesia have no access to pension payments from public or private sources. As a consequence, the elderly typically finance their living expenditures through income from work, savings, the selling of assets and support from children, family and relatives. Support from the family can come in various forms. Children, for instance, might live together with their elderly parents to form a common (multi-generational) household (see Section II.2.1). In addition, children might transfer money or in-kind benefits to their elderly parents to support them.

As shown in Gertler and Gruber (2002), Park (2003), Raut and Tran (2005), Cameron and Cobb-Clark (2008) and Sparrow et al. (2012), inter-household transfers constitute a main source of income and insurance of households against consumption shortfalls and health risks in Indonesia. Given the higher risk of suffering from health problems, the inability to work, insufficient savings and assets, the elderly are particularly likely to depend on and benefit from inter-household transfers.

Unfortunately, only limited information exists on old age related inter-household transfer patterns in Indonesia, which can be attributed to academic publications often not putting a special focus on the situation of the elderly and to data on income and transfer payment sections not being publicly available. Basically, the most reliable data sets available to analyse inter-household transfer patterns are the Indonesian Family Life Surveys (IFLS)[11].

The last round of the IFLS was conducted in 2007, collecting information on about 70,000 individuals living in about 13,000 households. Information on approximately 5,000 elderly persons (60+) was collected in the IFLS 2007. Results from the latest IFLS round, as shown in Table 34, illustrate the low level of pension coverage in Indonesia. Only about five percent to six percent of all elderly receive any sort of private or public pension. Furthermore, Table 34 is in line with three other stylised facts about pension coverage in Indonesia. Firstly, pension coverage tends to be higher among the younger cohort of the elderly. However, even among those elderly who are between 60 and 65 years old, only about seven percent receive or are entitled to any sort of formal pension. Secondly, elderly men are significantly more likely to be entitled/receiving a pension than women. Elderly men seem to be three to five times more likely to receive a pension than elderly women. Thirdly, coverage with a formal pension is much higher in urban than in rural areas. Furthermore, given that eligibility for access to a public pension in Indonesia is usually linked to work in the formal sector, the public sector or the military, coverage rates among the poor can be assumed to be much lower and close to zero.

[11] While the IFLS rounds contain a rich set of information on inter-household transfers one needs to bear in mind that the IFLS is not representative for a variety of reasons. First of all, the IFLS was not collected in several provinces in Indonesia. Secondly, due to non-random attrition of households in the IFLS between its first round in 1993 and the latest round in 2007, the derived statistics are likely not to be representative for the general population even in the sampled areas. However, the IFLS is still useful to obtain an idea of how transfer arrangements look like in Indonesia.

Table 34: Pension coverage of elderly individuals in Indonesia - (IFLS 2007)

Indicator	Level	60-64	65-69	70-74	75+
Number of elderly	Total	1519	1415	914	1282
	Urban	773	695	433	641
	Rural	746	720	481	641
	Men	699	642	395	534
	Women	820	773	519	748
Share of elderly with pension coverage	Total	6.78%	6.64%	4.92%	2.73%
	Urban	11.25%	11.37%	8.31%	4.06%
	Rural	2.14%	2.08%	1.87%	1.40%
	Men	11.16%	11.37%	9.11%	5.24%
	Women	3.05%	2.72%	1.73%	0.94%
Amount conditional of receiving a pension (Rp, monthly)	Total	1,208,512	1,193,494	1,233,310	911,645
	Urban	1,202,357	1,205,916	1,286,513	858,242
	Rural	1,239,286	1,105,300	1,020,500	1,110,000
	Men	1,259,194	1,200,698	1,288,174	879,627
	Women	1,065,682	1,168,278	1,044,333	1,030,571

Source: IFLS 2007

Given that only a small share of the elderly currently have access to formal pensions, informal safety nets such as inter-household transfers naturally play a large role in Indonesia. In order to analyse inter-household transfer payments, we classify households into age categories where the age category indicates whether at least one member of the household falls into the respective age range. Table 35 shows how complex transfer arrangements between households are in Indonesia. About 70 percent to 80 percent of elderly households provide cash or in-kind transfers to other households at least one time during the year (column “giving”) while about 80 percent to 90 percent of elderly households receive at least one time during the year transfers from other households (column “receiving”).

At least three key further insights emerge from Table 35. First, elderly households seem to be net-receivers of inter-household transfers. Households with an elderly person receive on average more from other households than they provide to other households. Second, this pattern seems to slightly increase with the age of the elderly person in the household. Households with an elderly person aged 70 or older seem to provide transfers less often than elderly households with elderly members who are 60 to 70 years old. Third, and particularly in rural areas, elderly households tend to be net receivers of inter-household transfers, which is in line with national migration patterns and overall transfer patterns from urban to rural areas in Indonesia.[12]

[12] The IFLS data does not allow for an analysis of transfers within households.

Table 35: Transfers given and received by elderly households - (IFLS 2007)

Indicator	Level	60-64		65-69		70-74		75+	
		Giving	Receiving	Giving	Receiving	Giving	Receiving	Giving	Receiving
Share of households	All	78.44%	83.83%	75.93%	85.26%	71.21%	84.97%	71.00%	81.69%
Average amount (Rp)		134,389	196,746	113,534	206,909	164,461	192,623	109,316	171,784
Share of households	Urban	79.74%	87.36%	74.74%	86.38%	70.73%	87.36%	72.10%	84.23%
Average amount (Rp)		106,271	162,588	85,495	143,515	122,930	156,139	88,343	147,942
Share of households	Rural	77.17%	80.39%	77.17%	84.09%	71.74%	82.37%	69.93%	79.22%
Average amount (Rp)		161,799	230,044	142,721	272,899	209,705	232,367	129,757	195,022
Share of households	Men	80.32%	86.40%	77.86%	86.66%	74.93%	85.38%	72.80%	82.74%
Average amount (Rp)		110,419	192,022	114,007	204,734	179,679	175,472	107,366	150,679
Share of households	Women	76.63%	81.36%	74.05%	83.92%	68.26%	84.65%	69.50%	80.82%
Average amount (Rp)		157,427	201,287	113,078	209,011	152,370	206,251	110,950	189,471

Source: IFLS 2007

Note: Average amount not conditional on providing/receiving a transfer but includes those households who do not provide/receive a transfer. Stated Rp amount is a monthly average calculated from the IFLS 2007 recall period on transfer payments (last 12 months). Transfers include those to/from children, siblings, parents, and other persons outside of the household.

3 Legal and Policy Background in Indonesia

Legal background

The Indonesian constitution guarantees the fulfilment of the basic needs of its entire people. The special needs of elderly people have been subsequently addressed in a variety of laws and decrees, the most important ones being Law Number 4 of 1965 on the provision of assistance to disadvantaged older persons, Law Number 13 of 1998 on the welfare of older persons[13], Law Number 40 of 2004 (Sistem Jaminan Sosial Nasional – SJSN – Law), Law Number 11 of 2009 on social welfare and Law Number 24 of 2011 on social security providers.

Law Number 4 of 1965 specifies that social assistance should be given to elderly persons who are unable to work for their livelihood, meaning that their lives are dependent on assistance from others. Law Number 13 of 1998 aims to increase the welfare of all older persons and to fulfil their rights to social protection and social assistance. It explicitly mentions that older persons who do not have the potential to become largely independent should be given social protection. The SJSN Law is currently the most discussed law, and the law with the greatest consequences for the current reform of the social security and social assistance strategy towards the elderly. Together with the BPJS Law 24 of 2011, it provides the legal framework for providing social security in employment- (BPJS employment) and health-related (BPJS health) areas. With respect to employment, the law specifies how work accidents, old-age savings, pensions and death benefits shall be provided by the government.

With the SJSN Law, the National Social Security Council (DJSN) commenced its work. Moreover, in line with the 1998 Law, a National Commission for Older Persons was established, following Presidential Decree Number 52 of 2004. It has the following tasks:

- To assist the president in coordinating the improvement of older persons social welfare initiatives.
- To provide recommendations to the president in developing policy on the improvement of older persons social welfare.

As discussed in more detail in WB (2012d) and GIZ (2006, 2010), the SJSN law, with its main focus on the national security system, aims at radically transforming the structure of social security in Indonesia by creating five separate social security funds for health, worker accident, pension, old-age savings and death benefits, with the aim to cover all Indonesians. In these five programmes, the same or similar benefits are expected to be provided to all formal and informal sector workers that contribute to the system. Social insurance funds collect contributions from workers, employers and the government in order to finance the promised benefits. Formal sector workers and their employers will make contributions as a percent of their wages, informal sector workers will contribute a flat amount in rupiah and the government will make contributions for the poor as a flat amount in rupiah (Muliati, 2013). With respect to the elderly, the SJSN law explicitly aims at creating a mandatory, contributory defined pension plan and old-age savings programme. While the pension plan relates to salaried workers and those informal sector workers that would like to participate in the programme, the old age savings programme is mandatory for everybody, including the poor and those working in the informal sector.

Reforms related to the SJSN law effectively mean that the existing funds in each of the five areas need to be merged into a common social insurance fund so that there is one single fund in each of the five

[13] Law 13/1998 superseded law 4/1965.

areas. Difficulties in merging these separate funds into a common fund have been compounded by delays as well as the need to further specify certain aspects of the reform (Law number 24 of 2011). In the case of pension payments, the SJSN law reforms aim to merge PT. TASPEN (civil service retirement programme), PT. ASABRI (military personnel retirement programme) and PT. Jamsostek (formal sector worker programme) into one new fund (BPJS), and to further extend pension coverage to informal workers.[14]

While Indonesia is committed to substantially reforming its pension system, several aspects of the reform are still unclear and leave a variety of questions open. The amount of assistance provided to poor working age adults among the current work force is unspecified. Moreover, the 2004 SJSN law mentions in article 17 that payments into the social security system on behalf of the poor shall be made by the government. However, the sub-articles to article 17 mention that payments on behalf of the poor should at first only be done for BPJS health, however, no timeline is set for when such payments would be made by the government for BPJS employment-related programmes. Thus, it remains unclear as to when and whether such payments on behalf of the poor will be implemented for BPJS employment components, such as the old age savings programme. It is also unclear as to what happens to informal sector workers who try to avoid contributing to the system or declare themselves as poor. As previously stated by the Ministry of Finance (MoF, 2011), this reform does not assist the current elderly and those close to retirement.

Focusing on the situation of the present elderly, it is very clear that the majority of Indonesia's elderly do not have access to any sort of pension. While it is estimated that Indonesia currently spends about one percent of its GDP on pension programmes (World Bank pension database, accessed January 20, 2013) only about eight percent of persons aged 60 or above receive any sort of pension payment, with the poor and the majority of the middle class being excluded. Even with the SJSN reform taking effect and achieving its objectives, a large majority of the elderly will remain without pension payments for several years to come under the current SJSN reform[15, 16].

While only a small share of elderly Indonesians are currently, and in the near future, covered under any sort of formal pension payment, the Government of Indonesia has indicated that social assistance should be given to poor elderly. This is reflected in BAPPENAS's social protection floor strategy (ILO, 2012), in which the goal is to create effective large-scale social security coverage and, at least, a social protection floor for all, including the current elderly[17]. More importantly, and most recently, Indonesia's MP3KI, as developed by SMERU and BAPPENAS in 2013, calls explicitly for the introduction of social pensions targeting poor elderly.

In line with this government policy, Indonesia started a social assistance cash transfer programme called ASLUT in 2006, that presently covers a small share of the poor elderly and which is discussed in more detail below.

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[14] Only Jamsostek will be transformed into BPJS Employment on January 1, 2014. PT. Taspen and PT. Asabri will continue to exist as BUMN, perhaps until as late as 2029.
[15] A more detailed overview on PT. ASPEN, PT. Jamsostek and PT. Asabri is provided in TNP2K (2013) and Priebe and Howell (2014).
[16] Only those with 15 years (ten years) of contribution payments into BJSN are considered to be eligible for the SJSN pension (old age saving) program. Furthermore, it should be noted that the official retirement age which underlies the old age savings and pension programme has not yet been announced.
[17] Table A2 in the appendix provides an overview on laws and treaties signed by Indonesia that relate to old age poverty.

Likewise, the Indonesian government has emphasised its commitment to the current elderly generation in signing the "ASEAN Vision 2020" in 1997 and the "ASEAN Human Rights Declaration" in 2012 to guarantee human rights and fundamental freedoms to women, children, the elderly, and persons with disabilities, migrant workers and marginalised groups. Indonesia has also ratified the ASEAN Charter (2008) to safeguard the interests and rights, provide equal opportunities as well as raise the quality of life and standard of living for children, the elderly, persons with disabilities and other vulnerable groups. The ASEAN Strategic Framework and Plan of Action for Social Welfare, Family and Children developed for the period 2011-2015 has been developed to assist ASEAN countries to implement the ASEAN Charter in order to achieve the priorities set out in the ASEAN Socio-Cultural Community (ASCC) Blueprint. Among the priority actions included in the Plan of Action are ASEAN exchanges and sharing experiences in the analysis, design and monitoring of social pensions to help tackle poverty, increase income, improve education and nutrition in poor households, promote gender equity and empower older people. The ASEAN Strategic Framework and Plan of Action for Social Welfare, Family and Children include activities to "promote active and healthy ageing and community care approaches."

The ASLUT programme

The biggest social assistance programmes in Indonesia are (i) the BSM (assistance programme to poor pupils/students), (ii) Jamkesmas/Jamkesda (health insurance for the poor), (iii) PKH (conditional cash transfers to poor households with a child or lactating mother), and (iv) Raskin (rice for the poor). All these programmes have a direct poverty focus and, although they are not targeted explicitly to the elderly, they tend to benefit those elderly that live in beneficiary households (further discussed below).

ASLUT is a social assistance programme for the poor elderly that is administered by the Ministry of Social Affairs (MoSA). It started to operate in 2006.[18] The programme takes its legitimacy directly from Law Number 13 of 1998, and aims to fill part of the gap between those covered by social security pension programmes and the poor and neglected elderly. Furthermore, ASLUT explicitly targets those elderly who are unable to care for themselves and who suffer from severe health and mobility constraints, meaning that their lives depend on the assistance of others. Therefore, ASLUT tries only to cover a sub-group of poor elderly, namely those who are severely disabled and who strongly depend on others.

The benefit level of ASLUT was Rp. 300,000 /month (US$30/month) until 2011. In 2012, the amount was reduced to Rp. 200,000/month (US$20/month). In its programme eligibility criteria, ASLUT follows the interpretation of the 1965, 1998 and 2004 laws very narrowly by focusing on the poor elderly who are neglected or suffer from health problems. Formally ASLUT's eligibility criteria are:

- Older persons aged 60 years or above who suffer from chronic diseases, whose lives depend on others' assistance or who are bedridden, neglected and who are poor.
- Older persons aged 70 years or above without the potential for empowerment and independence, who are neglected and poor.
- Possess an ID card/household card (*kartu keluarga*)/poverty letter (*surat keterangan tidak mampu*, or SKTM).

Verification of the eligibility criteria and selection of beneficiaries is done by the district MoSA officer and local facilitators. To what extent the programme is efficient and effective in identifying the right individuals is largely unknown. A qualitative study from HelpAge International and University of Indonesia's Demographic Institute (Howell and Priebe 2013, Priebe and Howell 2014) showed that most selected beneficiaries were women and, more generally, persons aged over 70. In general, the local selection process seems to follow programme guidelines, although the study found potential for improving the targeting accuracy. A practical problem in identifying the correct beneficiaries is the lack of a comprehensive database on potential individuals in their area of operations. Therefore, the likelihood of missing eligible individuals might be quite high.

ASLUT started to operate in six provinces in 2006, reaching 2,500 elderly. By 2012, the programme had extended to all 33 provinces covering about 27,000 elderly. MoSA's aim is to scale-up the programme to 32,500 elderly by 2014. While ASLUT formally covers all provinces, this does not mean that the programme is implemented in every district within a province or within all sub-districts within a selected district. Due to funding issues, ASLUT is not yet available in all areas of the country.

[18] ASLUT stands for Asistensi Sosial Lanjut Usia Terlantar. Until 2011 ASLUT was called JSLU (Jaminan Sosial Lanjut Usia).

The number of beneficiaries of ASLUT is very low. Even with 32,500 covered elderly by 2014, ASLUT benefits will be available only to a very small number of elderly. Measured against the total number of elderly 60 years and above (about 20 million or the total number of poor elderly 60 years and above (about 2.5 million), ASLUT will cover less than 0.2 percent of all elderly and less than 1.5 percent of poor elderly in Indonesia[19] by 2014. Thus, ASLUT is not available to the majority of elderly, and in particular the poor elderly. In the context of high prevalence of chronic diseases and disabilities among the elderly, ASLUT's gradual expansion of coverage is still some ways away from fully reaching its target beneficiaries. Particularly when compared to other major social assistance programmes such as BSM, Jamkesmas, PKH, and Raskin, the coverage rates of ASLUT appear very small.

The relative size of ASLUT among all social assistance programmes in Indonesia is not only reflected in its small number of beneficiaries but also in terms of expenditure shares among all social assistance programmes. A public expenditure review by the World Bank, using 2010 data (WB 2012a, 2012b, 2012c), showed that only about 0.1 percent of all social assistance expenditures have been devoted to ASLUT, while BSM received 13.8 percent, Jamkesmas 18.2 percent, PKH 4.3 percent and Raskin 53.4 percent.

While Indonesia's elderly population have the highest poverty rates among the entire population (together with children), only a small fraction have access to direct public income support, either through formal sector pensions or (even less likely) social assistance programmes (e.g. ASLUT). Some poor and non-poor elderly may receive additional assistance through other major social assistance programmes such as BSM, Jamkesmas, PKH and Raskin by living in an eligible household[20].

[19] Calculations are based on population and poverty estimates from the previous section assuming a poverty rate of 12.4% among the elderly in 2014 with a population of 20 million elderly (age 60 and above).

[20] Transfer programs such as BSM, PKH and Raskin are taken into account in the Susenas expenditure aggregate, which implies that poverty rates among the elderly (as well as the general population of recipients) would be much higher without these programs. For Jamkesmas, the direction of bias is less clear as the monetary benefit from receiving free healthcare is not imputed into the expenditure figure in the Susenas aggregate. However, (unconditional) health expenditure is often hard to interpret as being an indicator of higher welfare.

Insights from the Unified Database

In 2011, TNP2K, in coordination with BPS and with support from the Australian government and the World Bank, collected new data (PPLS 2011) containing information on the poorest 40 percent of households in Indonesia. In line with previous efforts, based on the 2005 Socio-economic census and the PPLS 2008, the PPLS 2011 is used to determine social protection programme beneficiaries[21].

Currently the PPLS 2011 and its proxy means testing formula are used as criteria for determining the regional Raskin quota, as well as PKH, Jamkesmas and BSM beneficiaries. Analysing the PPLS 2011 sheds light on:

- Targeting possibilities and costs
  - The number of elderly persons in the bottom (poorest) 40 percent of households
  - Prevalence of disability and chronic diseases among the elderly
- The coverage of elderly persons with social assistance (Raskin and health insurance)

Table 36 shows the distribution of individuals according to age, gender and decile of Indonesian households, as measured by TNP2K's proxy means test. According to the PPLS 2011, there are about 2.1 million elderly individuals aged 60 or older among the poorest ten percent of Indonesian households, with an approximately equal share of males and females. Likewise, in line with previous poverty findings from Susenas, there is a tendency for elderly people, particularly at older ages, to be among the poorest ten percent (decile 1) rather than being in the third or fourth decile of the wealth distribution, implying that poverty depth increases with age.

Table 36: Number of individuals by age group in PPLS 2011

	Decile	Below 18	18-59	60-64	65-69	70-74	75+
Total	All	29,135,159	44,716,099	2,365,791	2,016,037	1,627,099	1,867,639
Men	All	15,133,730	22,475,900	1,349,699	1,054,591	812,225	848,355
	1	6,484,527	7,389,283	300,459	263,099	220,229	237,648
	2	4,282,013	6,585,904	330,436	279,937	221,861	232,162
	3	3,241,073	6,141,319	346,109	268,032	199,042	204,139
	4	1,126,117	2,359,394	137,704	97,119	69,837	71,181
Women	All	14,001,429	22,240,199	1,251,083	1,107,850	916,130	990,483
	1	6,008,191	7,215,820	295,914	298,608	239,827	254,432
	2	3,957,672	6,500,279	361,569	330,347	270,910	289,755
	3	2,993,399	6,133,505	417,217	346,155	292,462	320,705
	4	1,042,167	2,390,595	176,383	132,740	112,931	125,591

Source: Calculations done by TNP2K based on PPLS 2011.

Given that the current ASLUT programme emphasises both poverty and health problems for eligibility, it is further interesting to analyse those elderly who report suffering from a disability or from chronic health problems. The results are tabulated below in Table 37 (disability) and Table 38 (chronic diseases). For people aged 60 and older, about 155,000 men and about 185,000 women report

[21] A more detailed description about the PPLS 2011 can be found in SMERU (2012).

suffering from at least one disability, and about 48,000 of these men and about 48,000 of these women were concentrated among the poorest ten percent of Indonesian households.

Table 37: Number of individuals with disability by age group in PPLS 2011

	Decile	Below 18	18-59	60-64	65-69	70-74	75+
Men	All	74,494	358,912	33,982	34,452	35,817	54,471
	1	29,621	108,965	9,047	10,091	11,314	17,720
	2	21,013	104,722	10,052	10,707	11,172	17,048
	3	17,524	104,395	10,580	10,030	9,838	14,704
	4	6,336	40,830	4,303	3,624	3,493	4,999
Women	All	56,078	270,296	32,679	37,912	44,172	72,409
	1	22,473	77,913	7,484	10,092	11,627	19,070
	2	15,833	78,040	9,304	11,437	13,276	21,428
	3	12,999	81,680	11,077	11,898	13,996	23,181
	4	4,773	32,663	4,814	4,485	5,273	8,730

Source: Calculations done by TNP2K based on PPLS 2011.
Note: Disability includes blind, deaf, mute, other physical disability, retardation, and mental disorder.

While disability prevalence presents a serious problem, a much larger number of elderly report suffering from chronic health problems. According to the PPLS 2011, some 510,000 men and about 630,000 women aged 60 and above reported chronic health problems. Out of these persons, some 145,000 men and about 150,000 women were among the poorest ten percent of Indonesian households (decile 1).

Table 38: Number of individuals with chronic diseases by age group in PPLS 2011

		Years					
	Decile	Below 18	18-59	60-64	65-69	70-74	75+
Men	All	50,915	554,019	118,436	123,650	118,133	150,962
	1	21,512	181,228	30,781	34,189	34,357	45,679
	2	14,415	162,466	34,918	37,859	36,758	47,145
	3	11,085	153,094	37,757	37,906	34,905	43,386
	4	3,903	57,231	14,980	13,696	12,113	14,752
Women	All	47,177	693,897	142,664	152,450	147,513	187,083
	1	19,551	203,738	31,377	38,091	35,958	45,020
	2	13,630	200,271	40,373	44,989	43,222	54,833
	3	10,348	207,512	49,720	49,934	49,216	62,902
	4	3,648	82,376	21,194	19,436	19,117	24,328

Source: Calculations done by TNP2K based on PPLS 2011.
Note: Chronic diseases include hypertension, rheumatism, tuberculosis, heart problems, asthma, diabetes, stroke, cancer or malignant tumours, and others including renal failure, stained lungs, HIV.

The PPLS 2011 further collected information on whether households had access to Raskin and health insurance (Jamkesmas and other private or public health insurance). A large share of individuals across all age groups reported having access to Raskin and health insurance programmes. While Table 39 presents the absolute numbers, relative numbers can be easily obtained with reference to Table 36.

Taking both tables together, about 80 percent of children and adults aged 18-59 are covered under Raskin, with 83 percent of elderly persons aged 60 and older being covered with Raskin. There is not much difference in coverage figures based on income deciles. The respective figures for decile 1 (the poorest ten percent) were about 83 percent for children and adults (aged 18 to 59 years) and about 86 percent for elderly persons (aged 60 and older). Similarly high coverage rates were reported for health insurance. Although lower, these figures are still above 50 percent for the elderly population.

Table 39: Number of individuals with reported social assistance coverage by age group in PPLS 2011

		Years					
	Decile	Below 18	18-59	60-64	65-69	70-74	75+
Raskin	All	23,405,307	36,122,396	1,990,951	1,705,876	1,386,036	1,476,756
	1	10,357,771	12,202,728	515,790	487,471	400,198	428,409
	2	6,545,390	10,541,141	583,800	516,640	419,757	444,461
	3	4,804,555	9,611,329	629,242	509,993	412,091	438,674
	4	1,697,591	3,767,198	262,119	191,772	153,990	165,212
Health	All	14,243,005	22,019,209	1,254,858	1,090,579	892,439	955,772
	1	6,476,751	7,706,535	335,749	320,933	266,172	285,352
	2	3,914,598	6,362,992	368,111	329,723	269,788	286,709
	3	2,830,289	5,685,767	387,516	318,489	258,786	277,642
	4	1,021,367	2,263,915	163,482	121,434	97,693	106,069
Raskin and Health	All	12,911,346	20,049,696	1,163,049	1,012,862	832,096	889,793
	1	5,975,576	7,139,207	314,988	301,832	250,621	268,556
	2	3,522,738	5,779,563	341,366	305,845	251,350	266,709
	3	2,504,671	5,092,927	355,607	293,147	239,515	256,275
	4	908,361	2,037,999	151,088	112,038	90,610	98,253

Source: Calculations done by TNP2K based on PPLS 2011.
Note: Coverage is calculated as household members having currently access to the specific programme. Health programmes cover Jamkesmas and other health insurance programmes.

4 Alternative Policy Options

Pension systems internationally

Developed countries characterised by a high share of formal sector workers predominantly have defined pension benefit schemes that are usually funded by so-called "pay-as-you-go" (PAYG) schemes or fully-funded defined-contribution (FF-DC) schemes[22]. In a defined benefit scheme or PAYG, a pension is guaranteed depending on a worker's earnings and number of years of contributions. The scheme is usually financed by the payroll contributions of workers and employers and is used to make benefit payments to those who are already eligible for old-age, disability and survivor pensions. In the latter scheme, workers accumulate their pension funds in individual accounts until they are eligible to receive benefits. Many developed countries offer an additional publicly financed "minimum pension" to those who fail to achieve sufficient pension income. The design of a "minimum pension" is usually done very carefully in order to minimise distortions to the labour market, and sometimes still requires a certain number of contributing years to the pension system. Financing a minimum pension becomes possible with the vast majority of workers accumulating sufficient pensions from formal sector schemes and a strong income tax base due to the large formal sector.

Developing and middle-income countries have traditionally tried to imitate pension systems from developed countries. However, given the large informal sector in developing countries and the small number of years most people have spent (if at all) in the formal sector, this has led to the majority of elderly persons being left without pension benefits or with pensions at very low levels (no coverage or inadequate coverage). Women in particular, who are less likely to participate in formal sector jobs, are often left without any sort of pension. Given the aging populations of many developing and middle-income countries, it is unsurprising that policies related to the design and reform of public pension programmes are highly pertinent in current policy debates.

Several developing and middle-income countries have modified their pension systems recently, or are about to modify them, in order to meet these challenges and to design pension systems that aim to cover all elderly in order to contribute to poverty mitigation and to allow for consumption smoothing (Asher, 2009; WB, 2013a, 2013b; ILO, 2011, ADB, 2012). The various reforms aim at ex-ante and ex-post strategies.

Ex-ante strategies aim to ensure that the current working age population, or at least 18-35 year olds, will have pensions by participating in some sort of private or public sector pension scheme. Governments in developing countries have taken various measures to encourage workers to contribute to pension payment schemes, experimenting with mandatory vs. voluntary contributions and by subsidising private pension contributions, either by mandating the employer to contribute to pension payments of the worker ("Bismarckian system"[23]), by providing substantial subsidies to insurance companies to offer retirement saving products, or recently, by creating matching funds.

To what extent these reforms will be successful in covering a larger part of the elderly with formal pension entitlements is still unclear. Two recent reports by the World Bank (2013a, 2013b) show very mixed results in the implementation of matched pensions with low-uptake rates in five out of six countries investigated (Columbia, Mexico, Peru, India and Thailand had low uptake rates and

[22] A famous exception is New Zealand with a flat pension payment which provides the same amount to every elderly independently of the number of years of contribution and the size of its contribution into the pension fund.
[23] A Bismarckian system shall refer in this context refer to a defined benefit pension scheme financed through payroll contributions paid by employers and/or workers.

implementation problems, while China had high uptake rates - Carranza et al., 2013; Dorfman et al., 2013; Palacios and Sane, 2013; Wiener, 2013). Likewise, as is often noted, these schemes are not likely to address the working poor, since mandating the poor to participate in formal earning schemes will be hard to enforce and is likely to decrease their welfare (WB, 2009).

While the design of ex-ante strategies that aim to provide workers with future pensions constitute the core of a pension system, **any reform that aims at improving ex-ante coverage will not affect the poverty and welfare situation of the current elderly and those that will not be able to accumulate sufficient pension entitlements in the near future (e.g. the 40-60/60+ year olds).**

Over the last one to two decades, higher economic growth and improved welfare levels and fiscal space prompted a variety of developing and middle-income countries to introduce social pensions on either a targeted or universal basis, to mitigate old-age poverty. The main feature of a social pension (which is an ex-post strategy) from other types of pension is that the eligibility criteria does not include a requirement for earmarked contributions. They are usually considered to be pure cash transfers rather than savings or insurance schemes.

However, there is an inter-linkage between ex-post and ex-ante strategies. A good ex-ante pension scheme will reduce the need for an ex-post pension scheme. Likewise, there can be negative impact from ex-post schemes (social pension) on ex-ante schemes. If ex-post benefit schemes are generous, workers (or employers) might feel less need to contribute to an ex-ante scheme. Thus, ex-ante and ex-post strategies should be designed to be as compatible as possible with each other.

There are various ways in which authors have tried to visualise/categorise the different pension options. One way that has been suggested, and is usually used by the World Bank, is the so-called multi-pillar system (WB, 1994; Holzmann et al., 2005):

Multi-pillar system:

- Zero pillar: Social pension with a poverty objective:
    - Explicitly non-contributory, financed from general government revenue and redistributive to the elderly on a means-tested or universal basis. Aims to cover (poor) elderly who do not have adequate access to pension income from other pillars.
- First pillar:
    - Mandated, unfunded and publicly managed defined benefit system.
- Second pillar:
    - Mandated, funded and privately managed defined contribution scheme.
- Third pillar:
    - Voluntary retirement savings.
- Fourth pillar:
    - Non-financial: family support, access to health care, housing.

As reported in more detail in ADB (2012), Holzmann et al. (2012), WB (2013b), the majority of countries have adopted a multi-pillar pension scheme, often relying on a mix of mandatory and voluntary schemes. Likewise, several developing and middle-income countries have recently adopted

some sort of a "Zero-Pillar" scheme. The actual design of "Zero-Pillar" schemes differs a lot from country to country in terms of means tested vs. universal, age eligibility criteria, benefit levels, etc.[24]

Internationally comparable data on pension coverage is difficult to compile since pension systems tend to be quite complex and depend on a lot of country-specific factors, such as life expectancy, retirement age, strength of unions, share of the formal sector workforce, share of the elderly in the population, GDP/capita, cultural norms, etc. The two most famous and often used databases are the World Bank's pension dataset and the "Social Security Programmes throughout the World" database, which is administered by the U.S. Social Security Administration and the International Social Security Association. The former dataset has been used in Pallares-Miralles et al (2012), and the latter one in publications, such as Bloom et al. (2007) and ILO (2011). Both datasets have their weaknesses, but are still useful in providing a general picture of the international landscape of pension coverage. In Table 40, results from the World Bank's pension data set are depicted for Asia, Africa and Latin America.[25]

Table 40: Classification of pension programmes - international

	Pillar 0	Pillar 1	Pillar 2	Statut ory retire-ment age	Recent year	Beneficiaries (Age 65+) Pillar 0 (thousands)	Beneficiaries (Age65+) Pillar 1 & 2 (thousands)	Total Beneficiarie s 65+ (thousands) (1)	Population over 65 years (thousands) (2)	Beneficiaries Coverage Definition: (1)/(2)
East Asia & Pacific										
Brunei Darussalam	U	PF		60						
Cambodia					2005	0.00	24.00	24.00	436.56	0.05
China	T	DB		50/60	2010	0.00	91,700.00	91,700.00	109,596.10	0.84
Fiji	T	PF		55	2006	0.00	8.51	8.51	36.04	0.24
Hong Kong SAR, China	U		DC	65	2005	0.00	461.02	461.02	833.10	0.55
Indonesia		PF		55	2010	0.00	1,097.01	1,097.01	13,318.35	0.08
Kiribati		PF		50						
Korea, Rep.	B	DB		65	2005	0.00	1,984.60	1,984.60	4,482.45	0.44
Lao PDR		DB		60	2005	0.00	19.38	19.38	214.28	0.09
Malaysia	T	PF		55	2007	0.00	1,075.74	1,075.74	1,202.87	0.89
Marshall Islands					2005	0.00	3.00	3.00		
Micronesia, Fed. Sts.		DB		60	2007	0.00	6.36	6.36	4.14	1.54
Mongolia	U	NDC		55/60	2008	2.54	193.40	195.94	104.10	1.88
Palau		DB								
Papua New Guinea		PF		55	2005	0.00	2.12	2.12	146.30	0.01
Philippines	B	DB		65	2007	0.00	749.26	749.26	3,570.57	0.21
Samoa	B	PF		55	2009	8.49	0.00	8.49	8.66	0.98
Singapore		PF		62	2009	0.00	199.55	199.55	487.45	0.41
Solomon Islands		PF								
Thailand	U	DB		55	2010	5,342.20	65.70	5,407.90	6,218.81	0.87

[24] Likewise, there exist several possibilities in how to combine universal and means-tested pensions (within the zero-pillar) and how to combine zero-pillar pensions with pillar 1 pensions, e.g. pension tests, minimum pensions, etc.
[25] Table A3 in the appendix provides the latest tables on pension programs based on the "Social security programs throughout the world" data base.

	Pillar 0	Pillar 1	Pillar 2	Statutory retire-ment age	Recent year	Beneficiaries (Age 65+) Pillar 0 (thousands)	Beneficiaries (Age65+) Pillar 1 & 2 (thousands)	Total Beneficiaries 65+ (thousands) (1)	Population over 65 years (thousands) (2)	Beneficiaries Coverage Definition: (1)/(2)
Timor-Leste	U				2010	63.61	0.00	63.61	32.98	1.93
Tonga										
Vanuatu		PF		55	2006	0.00	0.49	0.49	7.27	0.07
Vietnam	T	DB		55/60	2008	96.70	2,200.00	2,296.70	5,430.08	0.42
Latin America & Caribbean										
Antigua and Barbuda	T	DB		60						
Argentina	T, B	DB		60/65	2010	1,056.35	4,924.20	5,980.55	4,276.63	1.40
Barbados	T	DB		65	2007	10.40	20.27	30.68	25.80	1.19
Belize	T	DB		65	2010	4.30	3.29	7.59	13.64	0.56
Bolivia	U	DB		65	2007	397.42	75.75	473.17	439.92	1.08
Brazil	T	DB		60/65	2010	0.00	12,648.43	12,648.43	13,652.42	0.93
Chile	T		DC		2010	408.24	873.40	1,281.64	1,526.12	0.84
Colombia	T	DB	DC	55/60	2010	0.00	646.87	646.87	2,499.03	0.26
Costa Rica	T	DB	DC	60/62	2009	54.34	118.65	172.99	289.47	0.60
Cuba	T	DB		55/60						
Dominica		DB		60	2010	0.00	5.00	5.00		
Dominican Republic	T		DC		2008	0.00	48.00	48.00	587.02	0.08
Ecuador	T	DB		60	2009	285.27	180.24	465.50	887.86	0.52
El Salvador		DB	DC	55/60	2010	0.00	87.88	87.88	432.05	0.20
Grenada		DB		60	2010	0.00	6.32	6.32	7.53	0.84
Guatemala		DB		60	2008	0.00	59.39	59.39	596.89	0.10
Guyana		DB		60	2002	0.00	23.16	23.16	40.26	0.58
Haiti		DB								
Honduras		DB		60/65	2009	0.00	12.07	12.07	319.05	0.04
Jamaica	T	DB		60/65	2008	0.00	60.49	60.49	207.17	0.29
Mexico	B	DB	DC	65	2010	0.00	1,800.25	1,800.25	7,200.99	0.25
Nicaragua	T	DB		60	2008	0.00	47.62	47.62	251.15	0.19
Panama		DB	DC	57/62	2009	0.00	101.44	101.44	225.42	0.45
Paraguay		DB		60	2004	0.00	13.20	13.20	271.76	0.05
Peru		DB	DC	60	2008	0.00	481.92	481.92	1,652.55	0.29
St. Kitts and Nevis	T	DB		62						
St. Lucia		DB		63	2000	0.00	2.30	2.30	11.80	0.20
St. Vincent and the Grenadines		DB		60	2004	0.00	1.70	1.70	7.78	0.22
Suriname										
Trinidad and Tobago	T	DB		60	2009	0.00	70.08	70.08	90.53	0.77
Uruguay	T	DB	DC	60	2010	0.00	397.22	397.22	461.89	0.86
Venezuela, RB		DB		55/60	2006	0.00	426.04	426.04	1,374.32	0.31
South Asia										
Afghanistan				55/60	2006	0.00	87.80	87.80	612.42	0.14
Bangladesh	T				2010	2,250.00	0.00	2,250.00	6,819.26	0.33
Bhutan					2008	0.00	2.29	2.29	32.52	0.07
India	T	DB, PF		55	2010	10,170.00		10,170.00	57,635.68	0.18

	Pillar 0	Pillar 1	Pillar 2	Statutory retire-ment age	Recent year	Beneficiaries (Age 65+) Pillar 0 (thousands)	Beneficiaries (Age65+) Pillar 1 & 2 (thousands)	Total Beneficiaries 65+ (thousands) (1)	Population over 65 years (thousands) (2)	Beneficiaries Coverage Definition: (1)/(2)
Maldives	U		DC	65	2007	0.00	5.37	5.37	12.65	0.42
Nepal	T	PF		58	2006	0.00	685.50	685.50	1,022.58	0.67
Pakistan		DB		55/60	2009	0.00	245.82	245.82	6,846.54	0.04
Sri Lanka		PF		50/55	2005	0.00	104.21	104.21	1,337.06	0.08
Sub-Saharan Africa										
Angola										
Benin		DB		60	2004	0.00	12.63	12.63	238.48	0.05
Botswana	U				2009	90.64	0.00	90.64	73.99	1.22
Burkina Faso		DB		v	2005	0.00	13.26	13.26	285.06	0.05
Burundi		DB		60	2004	0.00	21.96	21.96	202.64	0.11
Cameroon		DB		60	2002	0.00	45.06	45.06	590.81	0.08
Cape Verde	T	DB		60/65	2007	0.00	3.48	3.48	21.72	0.16
Central African Republic		DB		60	2003	0.00	11.23	11.23	153.67	0.07
Chad		DB		60	2001	0.00	3.04	3.04	266.04	0.01
Comoros										
Congo, Dem. Rep.		DB		60/65						
Congo, Rep.		DB		60	2001	0.00	11.51	11.51	120.25	0.10
Cote d'Ivoire		DB		55	2004	0.00	80.65	80.65	663.73	0.12
Equatorial Guinea		DB		60						
Eritrea										
Ethiopia		DB								
Gabon		DB		55						
Gambia, The		PF		60	2006	0.00	5.87	5.87	43.89	0.13
Ghana		DB	DC	60	2010	0.00	107.31	107.31	930.17	0.12
Guinea		DB		55	2001	0.00	14.65	14.65	261.82	0.06
Guinea-Bissau										
Kenya		PF		60	2006	0.00	108.70	108.70	998.34	0.11
Lesotho	B				2008	80.00	0.00	80.00	97.34	0.82
Liberia	T	DB		60						
Madagascar		DB		55/60						
Malawi			DC							
Mali		DB		58	2010	2.39	96.35	98.74	338.20	0.29
Mauritania		DB		55/60	2002	0.00	9.61	9.61	73.84	0.13
Mauritius	U	DB		60	2004	0.00	161.48	161.48	77.97	2.07
Mozambique					2004	0.00	99.05	99.05	645.99	0.15
Namibia	U				2009	131.92	96.72	228.64	136.71	1.67
Niger		DB		60	2006	0.00	24.78	24.78	270.18	0.09
Nigeria	U in two states		DC	50						
Rwanda		DB		55	2004	0.00	26.19	26.19	232.79	0.11
Sao Tome and Principe		DB		57/62						
Senegal		DB		55	2010	0.00	168.85	168.85	299.54	0.56

	Pillar 0	Pillar 1	Pillar 2	Statut ory retire-ment age	Recent year	Beneficiaries (Age 65+) Pillar 0 (thousands)	Beneficiaries (Age65+) Pillar 1 & 2 (thousands)	Total Beneficiarie s 65+ (thousands) (1)	Population over 65 years (thousands) (2)	Beneficiaries Coverage Definition: (1)/(2)
Seychelles	U	DB		63						
Sierra Leone		DB		60						
Somalia										
South Africa	T				2010	2,490.00	336.59	2,826.59	2,317.35	1.22
Sudan		DB		60	2003	0.00	93.57	93.57	1,246.95	0.08
Swaziland	T	PF		60						
Tanzania		DB		60	2005	0.00	1.41	1.41	1,177.27	0.00
Togo		DB		60	2003	0.00	12.69	12.69	187.91	0.07
Uganda		PF		55	2003	0.00	6.40	6.40	722.65	0.01
Zambia	U in one state	DB		55	2003	0.00	25.25	25.25	328.46	0.08
Zimbabwe		DB			2005	0.00	26.82	26.82	471.58	0.06

Source: World Bank pension data base, Accessed 2013-01-30.
Note: Definitions: Pillar 0 includes social pensions including targeted (T) and universal programmes (U) and basic pensions (B) whereby basic pensions refer to flat rate pensions with minimum contribution, Pillar 1 include mandatory public schemes, Pillar 2 include mandatory private schemes, DB refers to Defined benefit schemes, NDC refer to Non-defined contribution schemes, PF refers to Provident Funds.

Table 40 shows strong patterns along regions and wealth levels. Sub-Saharan African countries tend to have still mostly only a single pillar (Pillar 1) with very low coverage rates among the elderly population. The few notable exceptions are South Africa, Namibia and Mauritius. In Latin America, most countries have at least two pillars and always have at least Pillar 1. Moreover, several Latin American countries have adopted "Zero Pillar" schemes. Many Latin American countries have adopted targeted social pensions. In the South and Southeast Asian regions, the majority of countries have adopted a social pension; however, no clear pattern between targeted or universal programmes emerges from the data[26].

Focusing on Indonesia and Southeast Asia, several countries such as Hong Kong, Malaysia, Singapore, and Vietnam have provided Pillar 1 pension coverage to a large share of the elderly. However, the majority of countries, including Indonesia have a relatively small share of their elderly population covered by Pillar 1 pensions. Countries that have adopted universal pensions, such as East Timor and Thailand, have the majority of their elderly population in "Zero-Pillar" schemes. The degree to which the elderly population is covered by targeted schemes depends on the specific targeting objective and varies from country to country. According to estimates, about eight percent of the Indonesian elderly population is covered by some sort of pension under Pillar 1. Compared to other Southeast Asian countries, Indonesia provides only a very small share of its elderly population with any sort of formal pension.

The following section will focus exclusively on the design of a "Zero-Pillar" option related to the Indonesian context.

[26] Indonesia had not been classified as having a "Zero Pillar" which might be due to ASLUT not being sizeable enough at 2010 data collection.

Why social pensions?

The two most prominent arguments in the international arena for social pensions come from the human rights and the poverty alleviation field. Human rights activists take the position that every elderly person has the fundamental right to a decent living. Depending on how "decent living" is defined, proponents of the human rights-based approach advocate for social pensions with the majority advocating universal pensions. Proponents of the poverty approach tend to focus more on poor elderly and, accordingly, tend to advocate a more targeted approach towards social pensions. In addition, both sides stress that poor elderly are maybe the most vulnerable population group, having a high likelihood of suffering both from ill health and from little chance of social mobility since earnings possibilities and changes in job careers are very limited at old age. Furthermore, social pensions help to mitigate the large gender inequalities that exist particularly in developing countries with respect to formal pension coverage.

In addition to moral or ideological opinions on social pensions and their different types, academic research has identified a variety of mechanisms for how social pensions can improve the welfare and economic growth in a country.

Academic research has shown that social pensions are beneficial for the elderly, their families and, in particular, children residing in an elderly household. Case and Deaton (1996) show that extending pension coverage to poor black elderly in South Africa significantly improved the health of these elderly. Inchauste et al. (2012) find that increases in social pensions have been a main source of poverty reduction in Thailand. Costa (1997) for the United States and De Vos and Lee (1993) and Pal (2007) for South Korea and Taiwan find that extending pension coverage fulfils the wishes of the elderly to be able to sustain their own households for longer and to reduce the immediate need for family care. Likewise, Antman (2010) finds that since remittances from children seem to decrease to the elderly parents in societies with high migration rates, such as Indonesia, the elderly seem to be more in need of social assistance than they could have anticipated during their working lives, which leaves them without sufficient lifetime savings. Similarly, Maitra and Ray (2003) find that pension incomes relieve some poor families from having to make financial transfers to elderly persons that could have jeopardised their own welfare levels.

Furthermore, studies on South Africa (Duflo, 2000), and Brazil (Evangelista de Carvalho Filho, 2012 and Ponczek, 2012) find that households with a recipient of social pension have positive effects on the enrolment of children, the health of the children and on reduced levels of child labour in households where eligible elderly beneficiaries reside, emphasising the point that pension benefits are shared among household members.

Extending pension coverage through social pensions has been found to be beneficial not only for the elderly and their families, but also for working age adults. Studies on Pakistan found that potential eligibility for pension payments optimises savings rates and investment decisions of working age adults (Kochar, 2004). In Mexico, providing pensions to poor rural households helped to decrease fertility levels in rural areas, since there was less of a need to have large numbers of children as an old-age security motive (Nugent and Gillaspy, 1983).

Poverty-targeted vs. universal social pensions

There are considerable benefits associated with social pensions. However, there exist different social pension schemes to choose from.

The key questions about the zero pillar have changed little but a few new ones have been added. For low and middle income countries, the fiscal affordability, disincentive effects, and administrative issues of universal benefits compared to means-tested approaches remain an evergreen. New to the discussion is the potential role of ex-ante interventions to address poverty and adequacy issues upstream, and the impact of social pensions on informality and thus coverage under formal earnings-related schemes. (Holzmann et al., 2012).

While in the 1960s and 1970s, the leaning of social protection and social assistance policies was towards universal programmes in most countries, the 1980s-2000s saw a radical shift in favour of targeted programmes throughout the developed and developing world. Many social welfare policies have been redesigned to narrow the scope of recipients through assets or means tests, income tests, claw-back taxes, diagnostic criteria, behavioural requirements and status characteristics. A central reason for this shift was the increasing focus of social protection programmes on poverty (Mkandawire, 2005). Among the programmes that use targeting, different mechanisms are used, the most common being proxy means testing (PMT) targeting, community targeting or self-targeting.

As shown earlier, in the field of pension coverage for the poor, both targeted as well as universal programmes are common, with a large majority of programmes being targeted programmes. However, as the most recent World Bank reports (WB2013a, 2013b) highlight, several developing countries have recently, or are about to, reform their pension systems in a variety of different ways.

Neither the "World Bank Pension" nor "Social Security Programmes across the World" databases provide much information on the design of the "Zero-Pillar" programmes. The only more or less comparable database on "Zero-Pillar" programmes is the database from HelpAge International. Table 41 shows the benefit levels and age requirements among countries that have adopted social pensions.

Table 41 provides information on the benefit levels and eligibility age of "Zero-pillar" programmes in Southeast Asia and Latin America. In general, the eligibility ages for social pension programmes tend to be higher than those for statutory retirement ages that relate to Pillar 1 or Pillar 2 programmes. In terms of benefit levels, there is large variation both among targeted as well as universal schemes. Not surprisingly, better-off countries show higher benefit levels. Due to the small number of countries that have adopted universal pension programmes, it is hard to make reliable statistical comparisons between targeted and universal social pension programmes in terms of patterns of retirement ages and benefit levels.

From the tables shown earlier as well as recent publications ADB (2012), ILO (2011), WB (2013a, 2013b), a few general statements about targeted vs. universal social pension can be made.

Observations:

- Most developing and middle-income countries have adopted multi-pillar pension programmes.
- Targeted vs. universal pensions:
    - Countries with a social pension tend to choose higher eligibility ages for the social pension compared to statutory retirement ages.
    - Targeting is more cost-effective in countries in which the majority of the population is not poor.

- Targeting is more effective in environments with high administrative capacities.
- Targeting should not be done on households with arrangements such as living alone since it introduces negative incentives for household living arrangements (Kakwani and Subbarao, 2005).
- Targeting is more effective in countries/populations with relatively low income mobility.
- Countries with large formal sectors, e.g. OECD countries tend to opt for minimum pensions with the benefit amount being below the minimum wage.

Table 41: "Zero-Pillar schemes"

			Monthly benefit level	
Country	"Zero Pillar"	Age	US$	US$ PPP
Asia				
Bangladesh	means tested		4	10
Brunei Darussalam	universal	60	201	268
Hong Kong	means tested		140	197
India	means tested	60	4	10
Indonesia	means tested		33	42
Korea, Republic of	means tested	65	80	115
Malaysia	means tested	60	94	163
Mongolia	means tested		26	65
Nepal	pensions tested	70	6	15
Papua New Guinea	universal	60	14	16
Philippines	means tested		12	20
Seychelles	universal	63	173	433
Thailand	pensions tested	60	19	34
Timor-Leste	universal	60	20	58
Viet Nam	means tested	60	6	14
Viet Nam	pensions tested	80	9	21
Latin America				
Argentina	means tested	70	122	210
Bolivia	universal	60	29	60
Brazil	means tested		331	331
Brazil	means tested	65	331	331
Chile	means tested	65	158	196
Colombia	means tested		34	45
Costa Rica	means tested	65	141	190
Dominican Republic	means tested	60	79	133
Ecuador	means tested	65	35	74
El Salvador	means tested	70	50	102
Guatemala	means tested	65	51	81
Jamaica	means tested	60	11	23
Panama	pensions tested	70	100	166
Paraguay	means tested	65	87	139
Peru	pensions tested	65	47	78
Suriname	universal	60	154	251
Uruguay	means tested	70	241	297
Venezuela, Bolivarian Republic of	means tested		360	427

Source: HelpAge International database, Accessed: November 2012.
Note: A full list of countries is shown in Table A4 in the appendix.

The observations in Table 41 provide, in most cases, little guidance for a specific government or policy maker on whether to adopt a social pension and what kind of social pension to design. The World Bank (WB, 2008, 2009, 2013a, 2013b; Dorfman and Palacios, 2012; Palacios and Sluchynsky, 2006) and the ILO (2011) do not recommend a particular type of social pension but simply state that the choice depends on the country-specific situation and that the choice should be guided by criteria of adequacy, affordability, sustainability, equity, predictability and robustness (WB, 2008). However, no best practice examples are provided on how to model/analyse these criteria. Current simulation models on pensions, including those of the World Bank, are very sensitive to the choice of parameters. Simulations should only be performed with very strong or simplifying assumptions, which, in turn, create difficulties in correctly predicting final outcomes (Barr and Diamond, 2009). Owing to the strong assumptions involved, in addition to the country-specific contexts in simulating pensions, no general recommendations exist on whether to adopt targeted or universal social pension.

While there are few general recommendations that allow for a clear and easy choice between a targeted and a universal social pension, some pros and cons comparisons of the options have been repeatedly pointed out. The classic argument in favour of poverty-targeted pensions is that they are more efficient in addressing social needs and that they exercise less financial constraints on the government budget.

"The untried scheme of universal non-contributory pensions may be dismissed from further consideration. The enormous expense is generally recognised as prohibitive, even if the plan itself were otherwise unobjectionable. Aside from financial considerations, the demoralising effect of pensioning indiscriminately the thrifty and the thriftless, the deserving and the undeserving, the needy and the well-to-do is an absolutely conclusive objection to the plan." (Baldwin, 1910)

"For purely selfish reasons, citizens might be expected to be attracted to the idea of universal pensions. They are good value, for they provide peace of mind regarding one's own fate, or the fate of a grandparent, aunt, friend or neighbour, in old age. Provided the pension is not set at too high a level, this peace of mind comes at an affordable price." (Willmore, 2007)

In the last two decades and with more and more developing and middle income countries adopting social pensions, the arguments in favour of or against targeted vs. universal pensions have grown substantially. While there are some arguments that clearly speak in favour of one of the two schemes, other arguments are less clear and depend on country context and personal judgment.

Arguments in favour of poverty-targeted pensions:

- Cost-effective way of reducing poverty:
    - Even with targeting errors, targeted pensions are usually found to be more cost effective in reducing poverty. This is particularly true in a context of relatively low poverty rates, such as five percent to 20 percent, compared to rates of 50 percent to 70 percent in several African countries.
- Less financial constraints for the government:
    - Usually, the budget allocated to a targeted pension is smaller than the budget needed for a universal pension, even when the benefit amount is higher and the age eligibility threshold is lower in targeted social pension schemes.
- Majority of benefits go to the poor:
    - A universal pension scheme would mainly benefit the non-poor population in Indonesia given that even when taking the near-poor into account, less than 50 percent of the elderly population is classified as poor according to BPS. While it is unclear whether a small benefit helps the middle class, a universal pension might take money away from the poor.
- Indonesia specific and institutional context:
    - In ASLUT, a poverty and health-targeted social pension programme already exists in Indonesia which draws its mandate from existing welfare laws and which receives political and financial backing by the government. Scaling up ASLUT is likely to be easier and faster than gaining political support, getting legislation passed and ensuring financial commitments for a completely new social pension programme, whether a poverty-targeted or universal social pension programme.
    - Poverty-targeted social pensions are in line with the existing laws on providing social assistance to the elderly.
    - MP3KI includes provisions for social assistance programmes to poor elderly.
    - Unified Database: No additional costs in terms of collecting a large scale targeting data base since with the PPLS 2011 and the possible collection of a new round of the PPLS in 2014/2015 big data sets are already collected in Indonesia and utilised.

Arguments in favour of a universal pension:

- Covers the middle-class:
    - The current pension system in Indonesia and any future reform on contributory schemes will leave a large section of the population without access to any formal pension. A targeted pension to poor elderly would not provide any social assistance to the Indonesian middle class.
- Lower administrative costs:
    - Universal social pension programmes are easier to implement since they only demand verification of age and, therefore, involve less administrative costs. To what extent a universal pension involves lower administrative costs in the Indonesian case is hard to determine. If the targeting mechanism (as a benchmark) is a PMT score from the Unified Database, the additional costs of targeting would be relatively minor since the database is collected anyway. However, if data from the Unified Database is not to be used then any data collection on the welfare or even on the health situation of the recipients, as in the case of ASLUT, would involve higher administrative costs per recipient compared to a universal pension programme.
- Targeting errors:
    - Targeting is usually accompanied by targeting errors (both inclusion and exclusion). The extent of the targeting errors (exclusion) varies greatly by country and can range between five percent and 50 percent (Grosh and Leite, 2009; Fiszbein et al. (2009)). Poor developing countries are found to have the biggest targeting problems. A field experiment in Indonesia on a self-constructed PMT score by Alatas et al (2012) shows that about 30 percent of households would be misclassified. Those that are misclassified tend to be households around the poverty line (near poor). The evaluation of the targeting accuracy of the PPLS 2011 is ongoing.

Miscellaneous arguments:

A variety of further arguments have been mentioned in the debate between targeted vs. universal pensions for which it is not a-priori clear whether they speak in favour of or against a particular social pension scheme.

- Incentives
    - Often, the argument that is raised is that universal social pension are less distortive and provide less incentives to reduce work efforts or participate in a formal pension contribution schemes during a person's working age (Willmore, 2007; ADB, 2012). The hypothesis being that a person will save or contribute less during their working age since they would be disqualified from a poverty-targeted pension. However, no empirical study exists that demonstrates this actually occurs. In addition, there are several arguments that speak against the narrow view presented in this discussion on incentives:
        - The predictability of receiving a poverty-targeted pension at old age: A worker will not know whether she/he will qualify for a targeted pension at old age. Uncertainty about the mechanism to determine eligibility, the difficulty in comparing her/his own future welfare with the rest of the population and targeting errors will make it nearly impossible for a worker to predict the likelihood of receiving a poverty-targeted social pension. Given the difficulty in predicting eligibility, it is highly unlikely that an individual of working age would base their decision to work, reduce their work efforts or not save in order to receive a poverty-targeted pension, especially if only a small share of the population is targeted. In this context, as pointed out in Gelbach and Pritchett (2000) and Ravallion (2008), targeting errors make it more difficult for individuals to predict future benefit entitlements.
        - Labour supply behaviour of elderly:
          As shown earlier, the labour supply of the elderly seems to decrease according to wealth levels. However, these gradients are very small and, in general, labour supply responses to income transfers can be expected to be very small[27]. Likewise, if the benefit amount of a universal programme is the same or only slightly below the benefit amount of a targeted pension, the universal programme creates large disincentives for working at old age, since it affects the work decisions of every single elderly person. Jung and Tran (2012) discuss, and find in their simulations, large incentive problems coming from universal social pension programmes.[28]
        - Income effects and saving effects:
          Universal pensions create disincentives to participating in contributory pension systems if the universal pension benefit is considered to be adequate and if there is uncertainty in the investment returns from the contributory pension system. Making the reasonable assumption that it will be hard for a working age individual

[27] Cameron and Cobb-Clark (2002, 2008) show that elderly labour supply in Indonesia is not affected by positive income shocks in terms of private transfers. To what extent this result holds in Indonesia for public transfers has not been investigated yet.

[28] This argument assumes that society wants the elderly to work at old age. While this is partly in contrast to attitudes in Western countries where the elderly are expected and desired to retire at a certain age, it is in line with the reasoning of several social welfare laws in Indonesia according to which social assistance should only be given to those in poverty and without the means of working and self-support.

to predict whether they will receive the targeted pension, it less clear whether he/she will stop saving for old age by participating in a contributory pension system.

- Political economy of budget processes:
    - Gelbach and Pritchett (2002) pointed out that targeting social assistance programmes to small groups might lead to the underfunding/less sustainability of the social programmes, since the middle and upper classes would try to undermine such programmes. While the argument is important, it is not clear how relevant it is empirically and in the Indonesian context. Taxes are paid mainly by the upper class, which might be reluctant to fund programmes for the less needy middle class (MacKellar, 2009). In some contexts, it is easier to receive political support for old-age poverty-targeted programmes than for universal pension programmes.
- Political consequences of mistargeting:
    - Mistargeting happens in every targeting scheme and can potentially lead to social problems in communities, depending on the severity of the mistargeting (Cameron and Shah, 2011). While it is acknowledged that targeting flaws exist, it is less clear whether the use of the PPLS dataset or other targeting mechanisms used in the context of targeted social pensions would result in such a problem. Alatas et al. (2012) found that community involvement can improve community satisfaction levels, and that the outcome depends on the particular implementation methods adopted by a programme.
- Cheating incentives:
    - In developed countries, pension entitlements have occasionally led to misreporting or postponing the reporting of the death of elderly beneficiaries. For instance, the longevity of Japanese elderly has recently been partly attributed to family members not reporting the death of an elderly pensioner in order to benefit longer from pension payments (New York Times, 2010). To what extent such misreporting would occur in Indonesia is unclear. While targeted pensions ideally have verification mechanisms in place, they might be marginally better suited to detecting incidences of cheating.

There are many arguments in favour of either targeted pension programmes or universal pension programmes. Both can sometimes be seen as complementary instead of competing with each other. Independent of this choice, several key parameters need to be determined in the design of a programme, some of which are summarised below:

Box 1: Parameters of social pensions

- Targeted and universal social pension
  - Rural or/and urban implementation
  - Age eligibility criteria
  - Benefit level
    - Orientation on minimum wage, poverty line, poverty gap among the elderly, existing social assistance programmes, etc.
  - Beneficiaries of multiple assistance programmes
    - Eligibility for social pension taking into account receipt of other programmes such as Jamkesmas, PKH, BSM, Raskin, etc.
- Targeted social pension
  - Targeting mechanism
    - PMT
    - Geographical/spatial targeting
    - Community rankings
    - Assessment by facilitators
- Universal social pension
  - Length of residency in the country
  - Years of contribution to a pension scheme
  - Requirement to formalise

5 Poverty Impact: Ex-ante Simulations on Poverty-Targeted vs. Universal Pension Benefits

In order to assess the potential impact of providing "Zero-Pillar" schemes for the elderly in Indonesia, two kinds of ex-ante simulations will be provided in this chapter. The first part of the simulations focuses on the poverty impact of providing cash transfers to the elderly. The second part simulates the anticipated budget costs of the policies.

This report focuses on comparing poverty-targeted vs. universal pension benefits. For simplicity, it is assumed that in both rural and urban areas, the same scheme will be introduced. The following analysis distinguishes between different age eligibility criteria (60+, 65+, 70+ and 75+ years), different benefit amounts[29] (200,000 Rp/month/beneficiary vs. 300,000 Rp/month/beneficiary) and different targeting scenarios (bottom five percent, ten percent, 15 percent, 20 percent and universal coverage). For simplicity, the simulations are similar to those presented in Dethier et al. (2010) and ILO (2012) and do not include assumptions about behavioural changes or changes in remittance structures.

The selection of elderly for the targeted scenarios is assumed to occur as in programmes such as BSM, Jamkesmas, PKH or Raskin, in which all households, including non-elderly households, are grouped into expenditure percentiles. In this context, targeting the elderly, for instance in the bottom five percent of the expenditure distribution, effectively means targeting each elderly person that lives in a household that has been classified into the bottom five percent. This figure does not need and, in fact, does not correspond to the bottom five percent of poorest elderly of the entire elderly population. To interpret the results, it is useful to bear in mind that, according to the BPS definition, about 12 percent of individuals were classified as poor in 2012, while about ten percent of households were classified as poor. Furthermore, it should be noted that the simulated benefits were added to the overall expenditures of eligible household in which the elderly live, whereby non-elderly household members would also benefit from the respective social pension.

[29] The choice of benefits amounts is based on ASLUT's payment structures in recent years. An alternative to determine the benefit amount would be to take the monetary value of the poverty gap among the poor elderly and to determine the average monetary value that is needed to eliminate poverty. This later approach has been chosen in some World Bank simulation studies. However, while it is an attractive way for a researcher it disregards the country context and makes two assumptions that do not hold in reality. First of all, the distance to the poverty line is not the same for every elderly person and second, the elderly do not live exclusively in single households, which is another implicit assumption in this "poverty gap approach".

Ex-ante simulations on poverty and social pensions

Perfect targeting scenario

Table 42 shows the simulated poverty effect on the discussed pension options for Susenas 2012. The simulations show a strong poverty effect for each of the scenarios. Targeting elderly from among the bottom five percent of Indonesian households reduces the poverty rate among the elderly by about four to five percentage points in their respective age group for benefit levels of Rp 200,000 per month per recipient and five to seven percentage points for the higher benefit scenario (Rp 300,000 per month per recipient). The strongest effect on poverty rates is found in the targeted scenarios of ten percent, 15 percent, 20 percent and in the universal scenario. Assuming perfect targeting, these last scenarios have exactly the same effect on poverty rates since every poor elderly receives a cash-transfer payment. This result is consistent with the poverty rate for households being just below ten percent.

Table 42: Ex-ante simulation results on poverty effect of social pensions in Indonesia– perfect targeting (2012)

		Poverty rates (%)								
					Benefit Level: 200,000 Rp/month			Benefit Level: 300,000 Rp/month		
Targeting Scenario	Eligible Age	Baseline Total	Baseline Elderly	Baseline Non-elderly	Total	Elderly	Non-elderly	Total	Elderly	Non-elderly
Bottom 5%	60	11.96	12.35	11.93	11.13	8.02	11.38	10.71	6.89	11.02
	65	11.96	13.48	11.88	11.37	8.83	11.50	11.03	7.44	11.22
	70	11.96	14.57	11.88	11.59	9.73	11.65	11.35	8.21	11.45
	75	11.96	15.01	11.91	11.76	10.29	11.79	11.64	8.87	11.69
Bottom 10%	60	11.96	12.35	11.93	9.66	2.58	10.24	9.23	1.43	9.87
	65	11.96	13.48	11.88	10.26	2.95	10.65	9.91	1.53	10.36
	70	11.96	14.57	11.88	10.84	3.51	11.07	10.59	1.95	10.87
	75	11.96	15.01	11.91	11.39	4.00	11.51	11.24	2.41	11.38
Bottom 15%	60	11.96	12.35	11.93	9.66	2.58	10.24	9.23	1.43	9.87
	65	11.96	13.48	11.88	10.26	2.95	10.65	9.91	1.53	10.36
	70	11.96	14.57	11.88	10.84	3.51	11.07	10.59	1.95	10.87
	75	11.96	15.01	11.91	11.39	4.00	11.51	11.24	2.41	11.38
Bottom 20%	60	11.96	12.35	11.93	9.66	2.58	10.24	9.23	1.43	9.87
	65	11.96	13.48	11.88	10.26	2.95	10.65	9.91	1.53	10.36
	70	11.96	14.57	11.88	10.84	3.51	11.07	10.59	1.95	10.87
	75	11.96	15.01	11.91	11.39	4.00	11.51	11.24	2.41	11.38
Universal	60	11.96	12.35	11.93	9.66	2.58	10.24	9.23	1.43	9.87
	65	11.96	13.48	11.88	10.26	2.95	10.65	9.91	1.53	10.36
	70	11.96	14.57	11.88	10.84	3.51	11.07	10.59	1.95	10.87
	75	11.96	15.01	11.91	11.39	4.00	11.51	11.24	2.41	11.38

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied.

Targeting error scenario

The decision to implement programmes that target the poor is accompanied with the potential for inclusion and exclusion errors. While there are different ways of defining these two types of errors, the classic way is to define inclusion errors as referring to individuals/households that are ineligible yet receive programme benefits (e.g. the non-poor), and exclusion errors which refer to individuals/households that should receive the benefits but that have not been selected.

One way to calculate inclusion and exclusion errors, which is followed here, is to compare predicted consumption expenditure levels (from a regression model) vs. observed consumption expenditure levels, and to see how well the model predictions are in line with the observed expenditure levels. While this method is very crude and overly simplistic, it has been applied to a variety of policy papers and is repeated here.

To simulate targeting errors in this simple approach, one needs to develop a formal model for the targeting mechanism. The Unified Database team at TNP2K runs such a model but, for obvious reasons, its specifications are not revealed. This report applies a simplified version of what has been reported in WB (2012b)[30] and generates a predicted expenditure value (PMT score) for each household and individual. The results provided are of an illustrative nature and are likely to overstate the extent of any inclusion and exclusion errors. However, they are potentially helpful in providing a lower bound on the targeting accuracy of a PMT targeting model.

The steps involved in this simulation are as follows:

- Selection of variables for predicting household per-capita expenditure levels.
- Predicting expenditure levels.
    - Step-wise regression approach.
    - Regressions are estimated at the district level.
    - Regressions are estimated for all households, including non-elderly households.
- Selection/classification of individuals and households.
    - Predicted expenditures are converted into real expenditure values using the BPS poverty lines (rural/urban provincial lines).
    - Individuals/households are grouped into percentiles of the nationwide expenditure distribution.
- Individuals in the actual vs. predicted percentiles are compared to calculate inclusion/exclusion errors.

Table 43 shows the obtained inclusion and exclusion errors for the outlined PMT model for all individuals (including the non-elderly). Inclusion and exclusion errors are found to be higher for targeting the bottom five percent level compared to targeting in bottom 20 percent level. At the bottom 20 percent level, about 30 percent of inclusion and exclusion errors are found using this very simple model.

[30] As described in WB (2012b) variables selection is based on Susenas and PODES data. The model in this research report just uses Susenas 2012 (March round) data which is likely to result in a worse targeting accuracy compared to the fuller approach. Since this sub-chapter is largely for illustrative purposes the simulations are still helpful and in line with the World Bank approach.

Table 43: Illustration of inclusion and exclusion error

Targeting scenario	Inclusion error (%)	Exclusion error (%)
Bottom 5%	46.54	42.17
Bottom 10%	39.70	36.41
Bottom 15%	35.12	32.03
Bottom 20%	31.33	28.67

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied. Inclusion error: Share of non-targeted individuals among selected beneficiaries. Exclusion error: Share of targeted individuals not included among selected beneficiaries.

In order to draw technical and policy conclusions about the choice of targeting levels or between having a targeted system vs. a universal system, it is important to look further into the nature of inclusion and exclusion errors.

While inclusion errors at the bottom five percent level appear high, one needs to note that more than 95 percent of individuals fall below the poor and near-poor poverty line (about 30 percent of individuals/households were classified as poor or near-poor in Indonesia in 2012). This result is shown in Table 44 and Figure 14. The majority of inclusion errors include individuals between the bottom five percent and ten percent of the expenditure distribution. Thus in a mandate that targets poor and near-poor individuals, nearly no inclusion errors are observed if one defines inclusion error according to being poor or near-poor. The same holds true for targeting higher levels, although targeting the bottom 20 percent sees a higher share of individuals not being in the bottom 30 percent of the population.

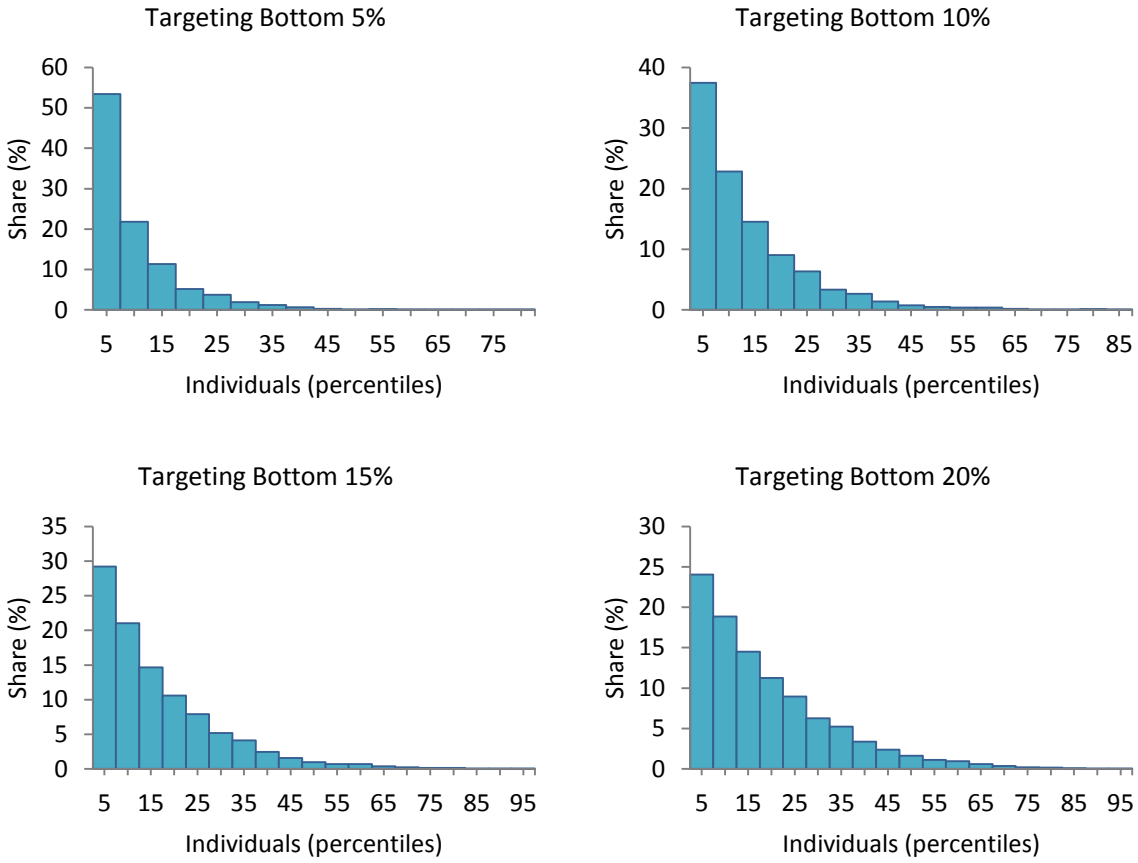
Table 44: Simulation on the distribution of selected beneficiaries

	Share of recipients (%) in observed expenditure percentiles						
Targeting Scenario	<5%	5%-10%	10%-15%	15%-20%	20%-25%	25%-30%	>30%
Bottom 5%	53.46	21.84	11.32	5.14	3.73	1.89	2.62
Bottom 10%	37.45	22.85	14.56	9.02	6.33	3.34	6.45
Bottom 15%	29.23	21.01	14.64	10.6	7.91	5.16	11.45
Bottom 20%	24.05	18.87	14.49	11.26	8.96	6.25	16.12

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied.

The obvious policy problem of targeted schemes in the Indonesian context can, therefore, be defined largely as stemming from exclusion errors. Under this assumption, not everybody who should receive programme benefits will be selected. In the targeting field, several ways have been proposed on how to reduce exclusion errors, such as the modification in modelling strategies (special PMT scores for the elderly only (Grosh and Leite, 2009)), combining community design lists with national PMT scores (Alatas et al. (2012), administrative grievance mechanism schemes (such as those that have been adopted in similar contexts in several Latin American countries and the Philippines), and checks with local programme facilitators.

Figure 14: Composition of individuals targeted for social assistance programs (2012)



Source: TNP2K calculations are based on Susenas March 2012 round.

The simulation of targeting errors also has effects on poverty rates since some share of the transfer benefits will be received by non-poor (although, mostly vulnerably poor) individuals. Table 45 shows the revised results of the effect of a particular pension scenario on poverty levels. In contrast to the previous results, the overall poverty effect differs in every single targeting scheme, excluding universal social pensions.

Targeting the bottom five percent reduced the elderly poverty rate by about two to three percent points across the various scenarios. The results are relatively similar to the perfect targeting scenario given that most of "inclusion errors" still go to poor individuals. However, the total effect is about 1.5 percent points lower compared to the perfect targeting scenario. Overall, all targeted scenarios still show a strong effect on reducing poverty levels among the elderly with the universal scenario showing the strongest impact on overall poverty rates.

Table 45: Ex-ante simulation results on poverty effect of social pensions – simulated targeting errors

Targeting Scenario	Eligible Age	Poverty rates (%)								
		Baseline			Benefit Level: 200,000 Rp/month			Benefit Level: 300,000 Rp/month		
		Total	Elderly	Non-elderly	Total	Elderly	Non-elderly	Total	Elderly	Non-elderly
Bottom 5%	60	11.96	12.35	11.93	11.27	9.76	11.39	11.05	9.15	11.21
	65	11.96	13.48	11.88	11.46	10.69	11.50	11.27	9.93	11.35
	70	11.96	14.57	11.88	11.66	11.94	11.65	11.50	10.96	11.52
	75	11.96	15.01	11.91	11.79	12.34	11.78	11.72	11.55	11.72
Bottom 10%	60	11.96	12.35	11.93	10.73	7.70	10.98	10.40	6.78	10.69
	65	11.96	13.48	11.88	11.07	8.52	11.20	10.78	7.36	10.96
	70	11.96	14.57	11.88	11.39	9.59	11.45	11.18	8.29	11.27
	75	11.96	15.01	11.91	11.67	10.15	11.69	11.55	8.90	11.59
Bottom 15%	60	11.96	12.35	11.93	10.34	6.00	10.69	9.95	4.99	10.36
	65	11.96	13.48	11.88	10.77	6.71	10.98	10.45	5.45	10.72
	70	11.96	14.57	11.88	11.19	7.69	11.3	10.96	6.28	11.11
	75	11.96	15.01	11.91	11.58	8.25	11.64	11.45	6.87	11.53
Bottom 20%	60	11.96	12.35	11.93	10.12	4.97	10.54	9.71	3.90	10.19
	65	11.96	13.48	11.88	10.59	5.51	10.86	10.26	4.18	10.58
	70	11.96	14.57	11.88	11.06	6.37	11.21	10.83	4.90	11.02
	75	11.96	15.01	11.91	11.52	7.04	11.59	11.38	5.54	11.47
Universal	60	11.96	12.35	11.93	9.66	2.58	10.24	9.23	1.43	9.87
	65	11.96	13.48	11.88	10.26	2.95	10.65	9.91	1.53	10.36
	70	11.96	14.57	11.88	10.84	3.51	11.07	10.59	1.95	10.87
	75	11.96	15.01	11.91	11.39	4.00	11.51	11.24	2.41	11.38

Source: Calculations by TNP2K based on Susenas 2012 round (March).
Note: Survey weights applied.

Ex-ante simulations on fiscal costs

Various factors (e.g. political, cultural, economic, etc.) need to be considered when choosing a particular pension scheme. While political and cultural factors are hard to judge and analyse, economists, particularly within the Ministry of Finance (MoF), need to be able to quantify and predict budget costs associated with particular pension schemes. Moreover, every social pension scheme is in budgetary competition with other social assistance programmes and social insurance schemes and, therefore, the costs and benefits of a programme need to be estimated.

Current government spending

To put the analysed pension options into perspective, it is necessary to compare the costs with those of other government programmes, such as classical social assistance programmes (e.g. BSM, Jamkesmas, PKH, Raskin) and subsidy programmes (e.g. fuel, electricity, fertiliser).

Table 46 shows current expenditure patterns as published by the MoF. According to the official statistics, Indonesia currently spends only a small share on social assistance programmes (less than

0.65 percent of total GDP) while fuel subsidies (1.6 percent of GDP) and even electricity subsidies (0.76 percent of GDP) are higher.

Table 46: Government expenditures on selected social assistance programmes in Indonesia (2009 – 2012)

	2009		2010		2011		2012	
Social assistance programmes	Rupiah	% of GDP	Rupiah	% of GDP	Rupiah	% of GDP	Rupiah	% of GDP
RASKIN	13,000	0.232	15,200	0.236	16,500	0.222	20,900	0.245
PKH	1,100	0.020	1,300	0.020	1,610	0.022	1,885	0.022
BSM	2,997	0.053	3,720	0.058	4,667	0.063	5,417	0.063
JAMKESMAS	4,525	0.081	5,126	0.080	6,284	0.085	7,295	0.085
NSA	73,814	1.317	68,611	1.066	71,104	0.957	55,378	0.648
Subsidies								
Fuel	45,000	0.803	82,400	1.280	165,200	2.224	137,400	1.608
Electricity	49,500	0.883	57,600	0.895	90,400	1.217	65,000	0.761
Fertiliser	18,300	0.327	18,400	0.286	16,300	0.219	14,000	0.164
Macro statistics								
Central government expenditures	628,800		697,400		908,200		1,069,500	
Public expenditures	937,400		1,042,100		1,295,000		1,548,300	
GDP	5,603,900		6,436,300		7,427,100		8,542,600	

Source: MoF 2012 publications.
Note: Rupiah values are in billion Rupiahs. NSA refers to National social assistance expenditures and includes the expenditures on Raskin, PKH, BSM, Jamkesmas and other social assistance programmes.

Estimates of the cost of social pensions

Table 47 and 48 show simulations of fiscal costs of the social pension schemes presented[31]. Up to 2020, the expected costs of each programme fall far below the costs of fuel and electricity subsidy programmes in Indonesia. However, there are notable differences across the various social pension options as well as over time. As expected, targeted programmes are significantly less expensive than universal programmes. If one takes classic cost-benefit measures into account, it is easy to see that on a per-Rupiah basis – even when making generous assumptions on targeting errors – that Rupiah spent on targeted schemes shows higher poverty effects than Rupiah spent on universal schemes. However, this is only one of many criteria to be considered in deciding on a particular pension scheme.

It is also important to look at the fiscal impact over a longer time period, with demographic population predictions and GDP growth scenarios being less reliable for more distant years. Since Indonesia is an aging society, all social pension programmes will become more expensive (as percentage of GDP) in future years.

[31] The simulations assume a constant GDP growth rate of 6% per year with annual inflation rate being 6% as well. The benefit amounts are annually adjusted with the inflation rate to maintain real benefit levels. An administrative cost of 150,000 Rupiah per year per beneficiary is included (adjusted for inflation as well). The population growth rate is taken from the World Bank population predictions for Indonesia.

Table 47: Budget simulations for social pensions in Indonesia, benefit level 200,000 Rp per month (2012 – 2050)

	Eligible Age	Year 2012	2015	2020	2030	2040	2050
Bottom 5%	60+	0.0315%	0.0358%	0.0455%	0.0706%	0.0985%	0.1233%
	65+	0.0213%	0.0237%	0.0296%	0.0482%	0.0716%	0.0945%
	70+	0.0134%	0.0152%	0.0184%	0.0301%	0.0484%	0.0673%
	75+	0.0071%	0.0085%	0.0108%	0.0169%	0.0293%	0.0437%
Bottom 10%	60+	0.0630%	0.0716%	0.0910%	0.1412%	0.1970%	0.2466%
	65+	0.0427%	0.0475%	0.0591%	0.0964%	0.1433%	0.1890%
	70+	0.0267%	0.0304%	0.0367%	0.0603%	0.0967%	0.1346%
	75+	0.0142%	0.0170%	0.0216%	0.0337%	0.0585%	0.0875%
Bottom 15%	60+	0.0945%	0.1075%	0.1366%	0.2118%	0.2955%	0.3698%
	65+	0.0640%	0.0712%	0.0887%	0.1446%	0.2149%	0.2834%
	70+	0.0401%	0.0457%	0.0551%	0.0904%	0.1451%	0.2019%
	75+	0.0213%	0.0255%	0.0325%	0.0506%	0.0878%	0.1312%
Bottom 20%	60+	0.1260%	0.1433%	0.1821%	0.2824%	0.3940%	0.4931%
	65+	0.0854%	0.0949%	0.1182%	0.1928%	0.2866%	0.3779%
	70+	0.0535%	0.0609%	0.0734%	0.1206%	0.1934%	0.2693%
	75+	0.0284%	0.0340%	0.0433%	0.0675%	0.1170%	0.1749%
Universal	60+	0.6298%	0.7164%	0.9104%	1.4119%	1.9701%	2.4656%
	65+	0.4269%	0.4746%	0.5910%	0.9642%	1.4328%	1.8895%
	70+	0.2673%	0.3045%	0.3672%	0.6030%	0.9672%	1.3463%
	75+	0.1421%	0.1698%	0.2163%	0.3373%	0.5851%	0.8746%

Source: Budget simulations by TNP2K. World Bank population projections used (mimeo).

Table 48: Budget simulations for social pensions in Indonesia, benefit level 300,000 Rp per month (2012 – 2050)

	Eligible	Year					
	Age	2012	2015	2020	2030	2040	2050
Bottom 5%	60+	0.0463%	0.0527%	0.0455%	0.0706%	0.0985%	0.1233%
	65+	0.0314%	0.0349%	0.0296%	0.0482%	0.0716%	0.0945%
	70+	0.0197%	0.0224%	0.0184%	0.0301%	0.0484%	0.0673%
	75+	0.0104%	0.0125%	0.0108%	0.0169%	0.0293%	0.0437%
Bottom 10%	60+	0.0926%	0.1054%	0.0910%	0.1412%	0.1970%	0.2466%
	65+	0.0628%	0.0698%	0.0591%	0.0964%	0.1433%	0.1890%
	70+	0.0393%	0.0448%	0.0367%	0.0603%	0.0967%	0.1346%
	75+	0.0209%	0.0250%	0.0216%	0.0337%	0.0585%	0.0875%
Bottom 15%	60+	0.1389%	0.1580%	0.1366%	0.2118%	0.2955%	0.3698%
	65+	0.0942%	0.1047%	0.0887%	0.1446%	0.2149%	0.2834%
	70+	0.0590%	0.0672%	0.0551%	0.0904%	0.1451%	0.2019%
	75+	0.0313%	0.0375%	0.0325%	0.0506%	0.0878%	0.1312%
Bottom 20%	60+	0.1852%	0.2107%	0.1821%	0.2824%	0.3940%	0.4931%
	65+	0.1255%	0.1396%	0.1182%	0.1928%	0.2866%	0.3779%
	70+	0.0786%	0.0896%	0.0734%	0.1206%	0.1934%	0.2693%
	75+	0.0418%	0.0499%	0.0433%	0.0675%	0.1170%	0.1749%
Universal	60+	0.9262%	1.0535%	0.9104%	1.4119%	1.9701%	2.4656%
	65+	0.6277%	0.6980%	0.5910%	0.9642%	1.4328%	1.8895%
	70+	0.3930%	0.4478%	0.3672%	0.6030%	0.9672%	1.3463%
	75+	0.2089%	0.2497%	0.2163%	0.3373%	0.5851%	0.8746%

Source: Budget simulations by TNP2K. World Bank population projections used.

Figure 15: Targeting scenario, elderly 65+ in Indonesia (2012 – 2050)

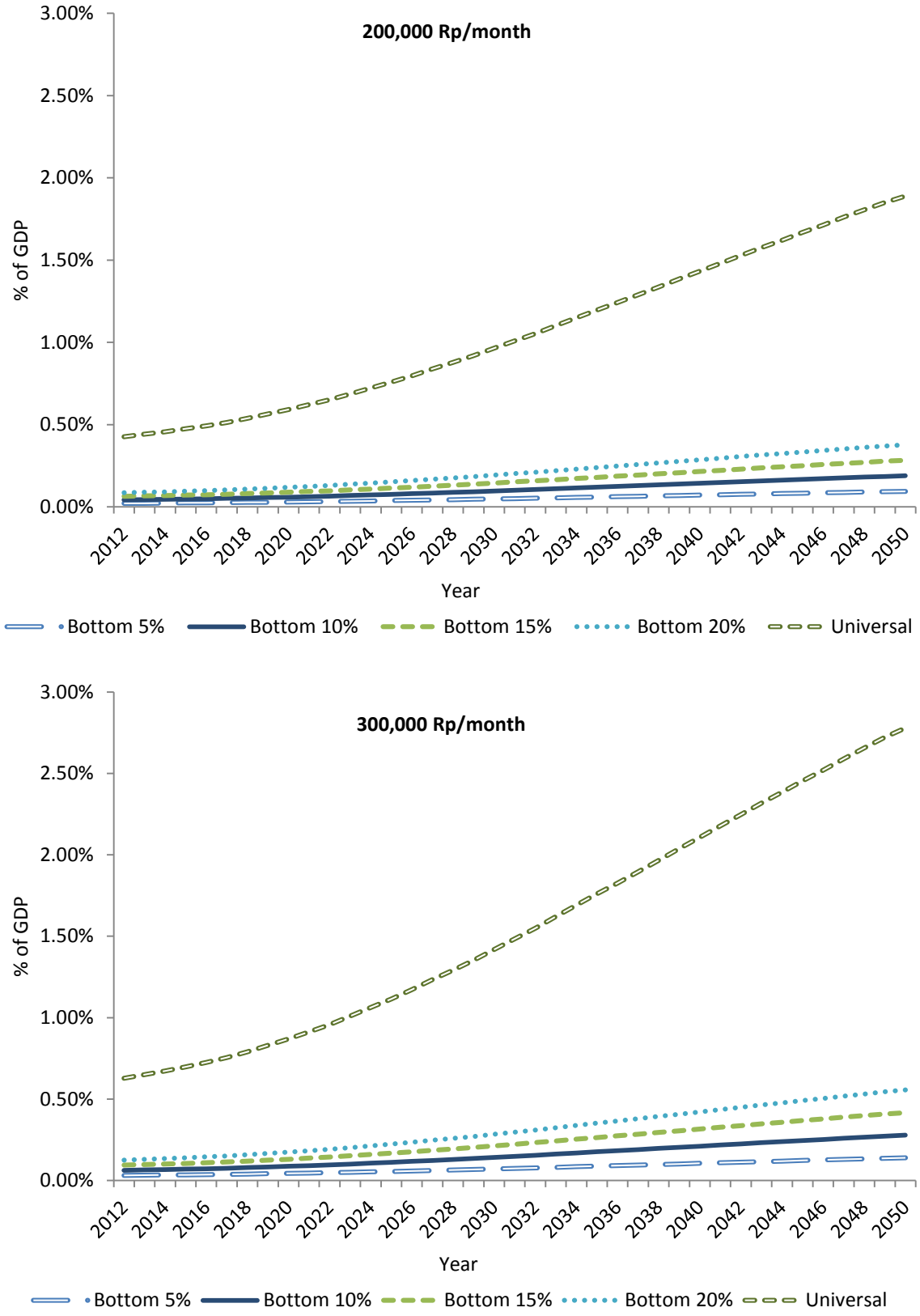
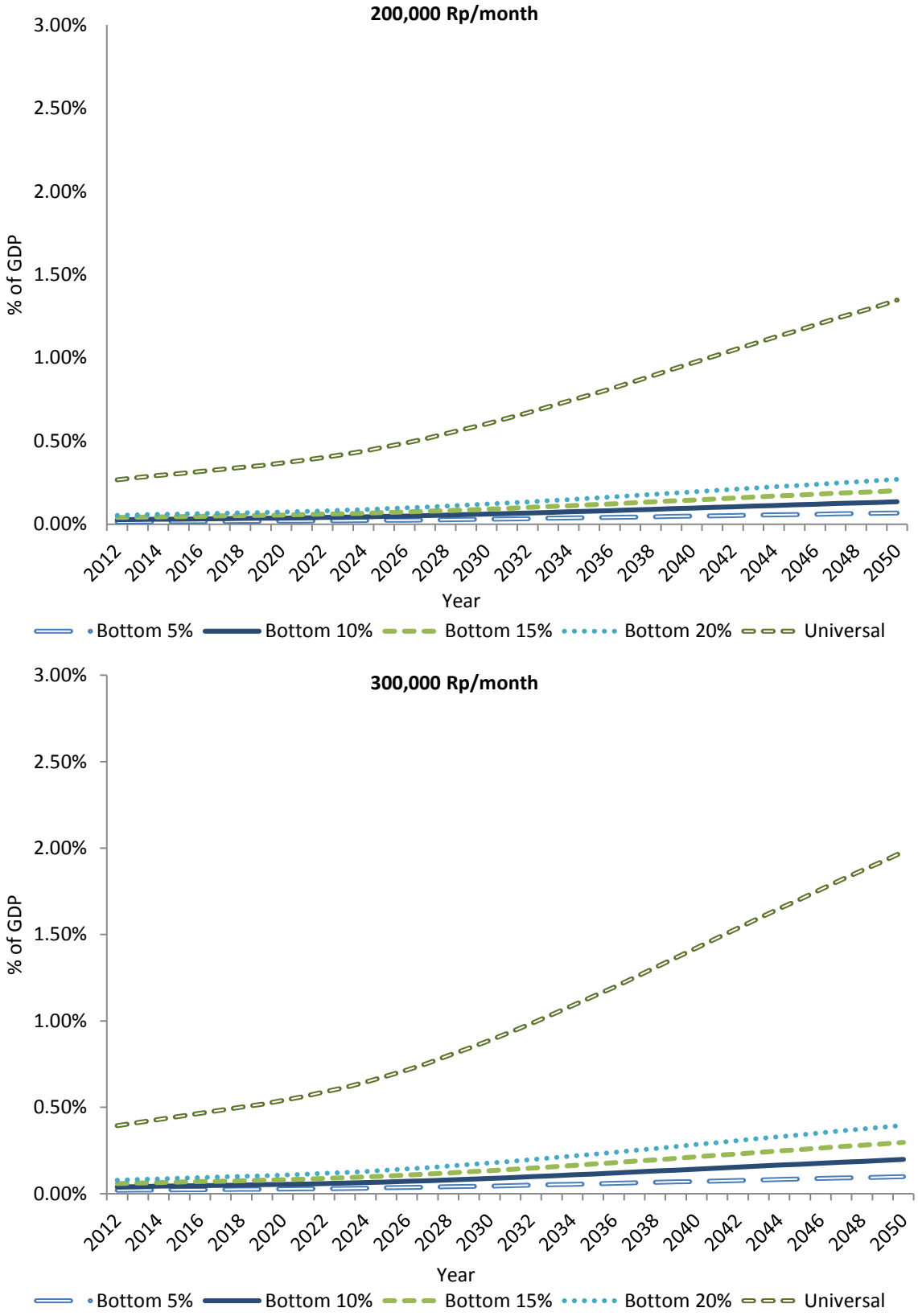


Figure 16: Targeting scenario, elderly 70+ in Indonesia (2012 – 2050)



Source: Budget simulations by TNP2K. World Bank population projections used.

6 Strategic Pathways for Social Pensions in Indonesia

Policy options

This report has presented a variety of arguments on why the commitment towards social protection of the elderly should be strengthened.

First of all, from a social and empirical point of view, the elderly are (together with children) the poorest population group in Indonesia. However, in contrast to other vulnerable population groups, such as poor women/families with young children, there exist no significant social assistance programmes that address old-age poverty. The only exception is ASLUT, which targets poor elderly with serious health problems who are unable to care of themselves. However, ASLUT's current operations are very small scale (about 27,000 beneficiaries in 2013) and only cover a fraction of its narrowly defined target population.

Secondly, it is important to note that caring for the needs of the elderly, particularly the poor ones, has been a central element of social protection programmes around the world and that pension systems have been established in most countries across the world to provide a large share of the population with some form of pension payment. However, in Indonesia only a small minority of the elderly (about eight percent) are currently covered with any sort of pension benefit. This coverage rate is very low with other middle income countries, and nearly all countries in Asia, showing significantly higher coverage rates for their current elderly population compared to Indonesia. It is further important to note that the majority of these pensions cover the wealthier elements of Indonesian society with the poor elderly having to make their living by working until very old age, by relying on savings or, most importantly, on family and community ties.

Thirdly, the government has been aware of the low pension coverage rates for many years, and of the responsibility to provide specific social protection measures towards the elderly. Although several domestic laws, national strategy papers and international conventions have been ratified by Indonesia's government over the last two decades on this issue, actual commitment towards the elderly needs to be strengthened. A major milestone towards achieving higher pension coverage rates was the SJSN Law of 2004. However, from a social protection point of view, the current reforms related to the SJSN law leave many problems unaddressed. While the general success of the SJSN reform remains to be seen, it is clear that its effects on the elderly population will not show any impact for the next two decades. The minimum number of years needed to qualify for old-age pensions and savings accounts is 15 years and 12 years, respectively. Hence, even if the SJSN reform becomes a success, one cannot expect to see a strong increase in pension coverage rates for the next 20 years.

With the SJSN reforms needing at least 20 years from now to show a significant effect on pension coverage rates, there is a strong case for addressing the social protection needs of Indonesia's current elderly population. Bearing in mind the government's financial needs and constraints, Indonesia's policy community should consider the following policy options as at least temporary options, for as long as the SJSN reforms do not affect a significant share of the population.

Option 1: Significant scaling up of ASLUT

ASLUT, based on Social Welfare Law number 13 of 1998, targets elderly persons who are poor, neglected and without means of self-support (significant health and mobility problems). Due to budgetary constraints, the programme currently covers only a fraction of eligible elderly and is not yet

operating in many *kecamatan* and *kabupaten*/*kota*. A scaling up of ASLUT would ensure at least that those elderly in the narrowly defined target group receive some sort of financial assistance at old age.

Option 2: Significant scaling up of ASLUT and targeting of poor elderly with severe disabilities

In its current design, ASLUT requires that the eligible elderly are poor, neglected and have significant health and mobility constraints. In addition, for those elderly aged between 60 and 70, ASLUT requires that beneficiaries are bedridden. Indonesia's government and Kemensos could consider loosening the targeting criteria slightly to broaden the ASLUT coverage to include all poor elderly persons with severe disabilities. This slightly broader coverage criteria would still be in the spirit of the Social Welfare Law (no. 13 of 1998), while ASLUT would extend its coverage to persons who are strongly dependent on the help of others, often without the means of working to maintain their livelihoods, and who face significantly higher health and transportation costs, namely persons with severe disabilities.

Option 3: Introduction of a social pension (poverty-targeted vs. universal)

From an international perspective, ASLUT is a rather unique programme in that it is not only targeted towards poor elderly but to those poor elderly who are also neglected and suffering from severe health and mobility problems. In contrast, most Western countries and the majority of developing countries in Asia and Latin America have introduced some sort of social pension that either provides benefits to poor elderly (poverty-targeted social pensions) or to all of the elderly (universal social pensions). As analysed in this report, both poverty-targeted and universal social pensions are likely to result in significant reductions in nationwide old-age poverty rates. While they come at costs that seem affordable, although specific eligibility and benefit criteria can result in higher cost scenarios, any decision on specific social pension scenarios depends on fiscal affordability and political support. Social pensions clearly show the strongest impact on old-age poverty rates. In contrast to Option 1 and Option 2, and as discussed in this report, the implementation of a social pension will need very close coordination with the SJSN pension reforms since there will be, depending on the specific implementation details of a social pension, clear interactions and potential overlaps with SJSN pensions.

Key actors on social pensions

Introducing a social pension or extending ASLUT on a significant scale (beyond the current level of ASLUT) involves commitment and support from a variety of actors. While support from civil society organisations, NGOs, the media and international organisations is very conducive to this purpose, the actual implementation of any reform In Indonesia is conducted by the government, parliament and ministries. The main actors are listed below:

Government and parliament

Government and parliament make the ultimate decisions on the design and scale of any pension reforms.

DJSN, BAPPENAS and Labour Unions: Strategic guidance

In the context of SJSN pension reforms, the National Commission for Older Persons and the National Social Security Council (DJSN) have been formed. Both organisations have an important influence on the coordination and implementation of pension reforms (Pillar 1 and Pillar 2) in Indonesia. Since a "Zero-Pillar" needs to be integrated into Pillar 1 and Pillar 2, and because of their mandates and technical capacities, the support and guidance of these organisations will be indispensable. However, since the SJSN law does not address the issue of social pensions, a separate piece of legislation and possibly a different institutional responsibility will be needed.

Similarly, the Ministry of National Development Planning (BAPPENAS), in its coordinating and advisory function, needs to be involved and consulted in any future reforms aimed at social pensions. BAPPENAS' MP3KI includes the development of comprehensive social assistance that provides regular cash transfers for poor elderly and persons with disabilities.

Furthermore, labour unions should be consulted in the process of developing social pensions in Indonesia. As the "SJSN debate" has shown, an important issue centres on the question of why formal sector employees should contribute their wages to their pension if the informal sector and the poor receive certain benefits without having contributed to a pension scheme.

Implementing ministries

MoSA: The Ministry of Social Affairs implements ASLUT, and will be the ministry tasked with executing and implementing pension reforms in the field (at least for poverty-targeted pensions, while universal social pensions may be administered by a different ministry/body).

MoF: Support from the Ministry of Finance will be needed at each phase of the process. In addition to its commitment and interests, MoF will need to make official predictions on the costs of social pension programmes, assessments of its economy-wide impact and budget predictions and budgeting processes.

TNP2K's role

Scaling up ASLUT

In the case of a significant scaling up of ASLUT, or the introduction of a social pension, the Unified Database provides a valuable tool for improving the targeting mechanism. The Unified Database can provide MoSA and its local facilitators and programme officers with lists of elderly with disabilities and chronic health problems among the very poor to save time and money which benefits both MoSA and Indonesia in general. The provided lists can be verified by MoSA officers and additional elderly persons can be added or excluded from the list.

Poverty-targeted social pension

In the case of a poverty-targeted social pension programme, benefits would go to the poor or poorest elderly in the country without necessarily the additional need to show health problems or signs of neglect, which could be hard to define and verify in practice. In line with the government's efforts to unify poverty targeting across its various social assistance programmes, data from the Unified Database PPLS can be used to identify potential poor elderly beneficiaries. The exact targeting mechanism, however, needs to be tested from among several available options, including PMT scores (as used in social assistance programmes like BSM, Jamkesmas, PKH), PMT score quotas (e.g. used in Raskin) or mixed schemes (including facilitators or community involvement).

Universal social pension

In the case of a universal pension, it might be unlikely that a social pension would immediately be able to cover 100 percent of the elderly population. Due to the necessity of building up essential service delivery infrastructure and budget processes, a gradual expansion of coverage would take place over several years. In the case of a gradual expansion, in which the government aims at operating in all geographic areas, it makes sense to start by covering the poorest elderly first and then extending coverage to all elderly over the years. In such a scenario, using the Unified Database to select the poorest elderly is advisable.

Bappenas is currently finalising the targets of the National Medium-Term Development Plan 2015-2019 (RPJMN 2015-2019). This RPJMN is the third phase of implementation of the National Long-Term Development Plan 2005-2025 (RPJPN 2005-2025), which forms the basis for ministries and government agencies when formulating their policies. The poverty targets have been set at between 6.5 percent and 8.0 percent by 2019. In order to achieve these targets it will be important to ensure increasing numbers of elderly are covered by some form of social pension.

Bibliography

ADB (2012), "Social protection for older persons – Social pensions in Asia" Asian Development Bank.

Akita, A. and R.A. Lukman (1995), "Interregional inequalities in Indonesia: A sectoral decomposition analysis for 1975-1992", Bulletin of Indonesian Economic Studies Vol. 31(2), pp. 61-81.

Akita, A. and A.S. Alisjahbana (2002), "Regional income inequality in Indonesia and the initial impact of the economic crisis", Bulletin of Indonesian Economic Studies Vol. 38(2), pp. 201-222.

Alatas, V., A. Banerjee, R. Hanna, B.A. Olken and J. Tobias (2012), "Targeting the poor: Evidence from a field experiment in Indonesia", American Economic Review Vol. 104(2), pp. 1206-1240.

Antman, F.M. (2010), "Adult child migration and the health of elderly parents left behind in Mexico", American Economic Review: Papers and Proceedings Vol. 100, pp. 205-208.

Asher, M.G. (2009), "Social pensions in four middle-income countries", in: "Closing the coverage gap – The role of social pensions and other retirement income transfers", World Bank.

Asra, A. (1999). "Urban-rural differences in costs of living and their impact on poverty measures" Bulletin of Indonesian Economic Studies Vol. 35(3), pp. 51-69.

Ananta, A. and E.N. Arifin (2009). "Migration, aging and economic development in Indonesia", Institute of Southeast Asian Studies, working paper.

Angeles, G., D.K. Guilkey and T.A. Mroz (2005). "The effects of education and family planning programs on fertility in Indonesia", Economic Development and Cultural Change Vol. 54(1), pp. 165-201.

Arifianto, A. (2006). "Public policy towards the elderly in Indonesia: Current policy and future directions", SMERU research report.

Baldwin, F.S., (1910). "Old age pension schemes: A criticism and a program", The Quarterly Journal of Economics Vol. 24(4), pp. 713-742.

Banerjee, A.V. and E. Duflo (2010). "Aging and Death under a Dollar a Day" in "Research Findings in the Economics of Aging", NBER, Chicago Press.

Barr, N. and P. Diamond (2009). "Reforming pensions: principles, analytical errors and policy directions", International social security review 62(2), pp. 5-29.

Beckett, M. (2000). "Converging health inequalities in Later Life – An artefact of mortality selection?" Journal of Health and Social Behaviour Vol. 41(1), pp. 106-119.

Bertranou, F.B. (2001). "Pension reform and gender gaps in Latin America: What are the policy options?" World Development Vol. 29(5), pp. 911-923.

Bidani, B. and M. Ravallion (1993). "A regional poverty profile for Indonesia", Bulletin of Indonesian Economic Studies Vol. 29(3), pp. 37-68.

Bloom, D.E., D. Canning, R. Mansfield and M. Moore (2007). "Demographic change, social security systems, and savings", Journal of Monetary Economics Vol. 54(1), pp. 92-114.

Bloom, D.E., E. Jimenez and L. Rosenberg (2011). "Social protection of older people", Harvard program on the global demography of aging, working paper.

Booth, A. (1993). "Counting the poor in Indonesia", Bulletin of Indonesian Economic Studies Vol. 29(1), pp. 52-83.

Booth, A. (2000). "Poverty and inequality in the Soeharto era: An assessment", Bulletin of Indonesian Economic Studies Vol. 36(1), pp. 73-104.

BPS (2012). "Kesulitan Fungsional Penduduk Indonesia – Hasil Sensus Penduduk 2010", Central Statistical Office.

Cameron, L.A. (2000). "The residency decision of elderly Indonesians: A nested Logit Analysis", Demography, Vol. 37(1), pp. 17-27.

Cameron, L.A. and D.A. Cobb-Clark (2002). "Old-age labor supply in the developing world", Applied Economics Letter Vol. 9(10), pp. 649-652.

Cameron, L.A. and D.A. Cobb-Clark (2008). "Do co-residency and financial transfers from the children reduce the need for elderly parents to works in developing countries?", Journal of Population Economics Vol. 21(4), pp. 1007-1033.

Cameron, L. and J. Williams (2009). "Is the relationship between socioeconomic status and health stronger for older children in developing countries?", Demography Vol. 46(2), pp. 303-324.

Cameron, L. and M. Shah (2011). "Can mistargeting destroy social capital and stimulate crime?", Monash University working paper.

Case, A. and A. Deaton (1996). "Large cash transfers to the elderly in South Africa", NBER working paper no. 5572.

Cotlear, D. and L. Tornarolli (2010). "Poverty, the aging and the life cycle in Latin America" in: "Population Aging: Is Latin America Ready?", World Bank.

Costa, D.L. (1997). "Displacing the family: Union army pensions and elderly living arrangements", Journal of Political Economy Vol. 105(6), pp. 1269-1292.

Deaton, A. and C. Paxson (1995), "Measuring poverty among the elderly", NBER working paper no. 5296.

Deaton, A. (1997). "The analysis of household surveys: A micro econometric approach to development policy", Baltimore. John Hopkins University Press for the World Bank.

Deaton, A. and C. Paxson (1998a). "Poverty among children and the elderly in developing countries", Center for Research on Child Wellbeing, Working Paper no. 98-09.

Deaton, A. and C. Paxson (1998b). "Economies of scale, household size, and the demand for food", Journal of Political Economy Vol. 106(5), pp.897-930.

Dethier, J.-J., P. Pestieau and R. Ali (2010). "Universal minimum old age pensions – Impact on poverty and fiscal cost in 18 Latin American countries", World Bank, Policy research working paper 5292.

De Vos, S. and Y-J. Lee (1993). "Change in extended family living among elderly people in South Korea 1970-1980", Economic Development and Cultural Change Vol. 41(2), pp. 377-393.

Dorfman, M.C., D. Wang, P. O'Keefe and J. Cheng (2013). "China's pension schemes for rural and urban residents", in: "Matching contributions – A review of international experience", World Bank.

Dreze, J. and P.V. Srinivasan (1997). "Widowhood and poverty in rural India: Some inferences from household survey data", Journal of Development Economics Vol. 54(2), pp. 217-234.

Duflo, E. (2000). "Child health and household resources in South Africa: Evidence from old pension program", American Economic Review Papers and Proceedings Vol. 90(2), pp. 393-398.

Duflo, E. (2001). "Schooling and labor market consequences of school construction in Indonesia: Evidence from an unusual policy experiment", American Economic Review Vol. 91(4), pp. 795-813.

Dupre, M.E. (2008). "Educational Differences in health risks and illness over the life course: A cumulative disadvantage theory", Social Science Research Vol. 37, pp. 1253-1266.

Edmonds, E.V. (2006). "Child labor and schooling responses to anticipated income in South Africa", Journal of Development Economics Vol. 81(2), pp. 386-414.

Evangelista de Carvalho Filho, I. (2012). "Household income as a determinant of child labor and school enrolment in Brazil: Evidence from a Social Security Reform", Economic Development and Cultural Change Vol. 60(2), pp.399-435.

Fan, E. (2010). "Who benefits from public old age pensions?", Economic Development and Cultural Change Vol. 58(2), pp. 297-322.

Fiszbein, A., N. Schady, F.H.G. Ferreira, M. Grosh, N. Kelleher, P. Olinto and E. Skoufias (2009). "Conditional Cash Transfers – Reducing Present and Future Poverty", World Bank Policy Research Report.

Gelbach, B. and L. Pritchett (2000). "Indicator targeting in a political economy: Leakier can be better", Journal of Policy Reform Vol. 4(2), pp. 113-145.

Gelbach, B. and L. Pritchett (2002). "Is more for the poor less for the poor? The politics of means-tested targeting", The B.E. Journal of Economic Analysis & Policy Vol. 0(1), p.6.

Gertler, P. and J. Gruber (2002). "Insuring consumption against illness", American Economic Review Vol. 92(1), pp. 51-70.

GIZ (2006). "Social Security Reform in Indonesia", German Agency for Technical Cooperation.

GIZ (2010). "Old-age security in Indonesia: What next in the strategic policy development process?", GIZ Working paper no. 1. German Agency for Technical Cooperation.

Grimm, M. (2010). "Mortality shocks and survivors' consumption growth", Oxford Bulletin of Economics and Statistics Vol. 72(2), pp. 146-171.

Grosh, M. and P.G. Leite (2009). "Defining eligibility for social pensions: A view from a social assistance perspective", in: "Closing the coverage gap – The role of social pensions and other retirement income transfers", World Bank, Edts: R. Holzmann, D.A. Robalino and N. Takayama.

Holzmann, R. and R. Hinz (2005). Old-age income support in the 21st century: An international perspective on pension systems and reform. World Bank.

Holzmann, R., R.P. Hinz and M. Dorfman (2008). "Pension systems and reform conceptual framework", World Bank, Social protection discussion paper no. 824.

Holzmann, R. (2012). "Global pension systems and their reform – Worldwide drivers, trends and challenges", World Bank, Social protection and labor working paper series 1213.

Howell, F. and J. Priebe. (2013). "Social assistance for the elderly in Indonesia: An empirical analysis of the ASLUT programme", TNP2K Working Paper 05-2013. Tim Nasional Percepatan Penanggulangan Kemiskinan (TNP2K). Jakarta, Indonesia.

Hull, T.A. (1976). "Rapid fertility decline – A comment", Bulletin of Indonesian Economic Studies Vol. 12(2), pp. 106-116.

Hull, T.A. (1980). "Fertility decline in Indonesia – A review of recent evidence Bulletin of Indonesian Economic Studies Vol. 16(2), pp. 104-112.

Hull, T.A. (1981). "Indonesian population growth 1971-1980" Bulletin of Indonesian Economic Studies Vol. 17(1), pp.114-120.

Hull, T.A. (2010). "Estimates of Indonesian population numbers: First impressions from the 2010 Census", Bulletin of Indonesian Economic Studies Vol. 46(3), pp. 371-375.

Hull, T.A. and G.L. Dasvarma (1988). "Fertility trends in Indonesia 1967-1985", Bulletin of Indonesian Economic Studies Vol. 24(1), pp. 115-122.

Hull, T.A, and Tukiran (1976). "Regional variations in the prevalence of childlessness in Indonesia", Indonesian Journal of Geography Vol. 6(32), pp. 1-25.

ILO (2011). "World Social Security Report – Providing coverage in times of crisis and beyond", International Labour Organisation, Geneva.

ILO (2012). "Social protection assessment based national dialogue: Towards a nationally defined social protection floor in Indonesia", International Labour Organisation.

Inchause, G., S. Olivieri, J. Saavedra and H. Winkler (2012). "What is behind the decline in poverty since 2000? Evidence from Bangladesh, Peru and Thailand", Background paper for the World Development Report 2013.

Islam, I. and H. Khan (1986). "Spatial patterns of poverty and inequality in Indonesia" Bulletin of Indonesian Economic Studies Vol. 22(2), pp. 80-102.

Jung, J. and C. Tran (2012). "The extension of social security coverage in developing countries", Journal of Development Economics Vol. 99(2), pp. 439-458.

Kakwani, N. and K. Subbarao (2005). "Aging and poverty in Africa and the role of social pensions", World Bank, Social protection discussion paper series no. 521.

Kochar, A. (2004). "Ill-health, savings and portfolio choices in developing countries", Journal of Development Economics Vol. 73(1), pp. 257-285.

Kreager, P. and E. Schröder-Butterfill (2005). "Actual and de facto childlessness in old-age: Evidence and implications from East Java, Indonesia", Population and Development Review Vol. 31(1), pp. 19-56.

Kreager, P. and E. Schröder-Butterfill (2008). "Indonesia against the trend? Ageing and inter-generational wealth flows in two Indonesian communities", Demographic Research, Vol. 19, pp. 1781-1810.

Lanjouw, P. and M. Ravallion (1995). "Poverty and household size", Economic Journal Vol. 105(433), pp. 1415-1434.

Lanjouw, J.O., P. Lanjouw, B. Milanovic and S. Paternostro (2004). "Relative price shifts, economies of scale and poverty during economic transition", The Economics of Transition Vol. 12(3), pp. 509-536.

Lloyd-Sherlock, P. (2000) "Old-age poverty in developing countries: New policy challenges", World Development Vol. 28(12), pp. 2157-2168.

Lloyd-Sherlock, P. and E. Schröder-Butterfill (2008) "Social security pension "reform" in Thailand and Indonesia: Unsustainable and unjust", University of East Anglia, School of Development Studies, Working paper 03.

MacKellar, L. (2009). "Pension systems for the informal sector in Asia", World Bank, Social protection discussion paper no. 903.

Maitra, P. and R. Ray (2003). "The effect of transfers on household expenditure patterns and poverty in South Africa", Journal of Development Economics Vol. 71(1), pp. 23-49.

Mkandawire, T. (2005). "Targeting and universalism in poverty reduction", United Nations Research Institute for Social Development. Social Policy Development Programme Paper no. 23.

MoF (2011). "Old Age Saving Program, Pension Program, and Death Benefit Program", White paper, Ministry of Finance.

Muliati, I. (2013). "Pension reform experience in Indonesia", World Bank, Present at the IMF Conference for Designing Equitable and Sustainable Pension Post Crisis World.

Nam, C.B., S. Dasvarma and S.P. Rahardjo (1991). "The changing age distribution in Indonesia and some consequences", Bulletin of Indonesian Economic Studies Vol. 27(2), pp. 121-136.

New York Times (2010). "Japan, Checking on Its Oldest, Finds Many Gone," Last modified August 14, http://www.nytimes.com/2010/08/15/world/asia/15japan.html?_r=0.

Nugent, J. B. and R.T. Gillaspy (1983). "Old age pensions and fertility in rural areas of less developed countries: Some evidence from Mexico", Economic Development and Cultural Change Vol. 31(4), pp. 809-823.

Pal, S. (2007). "Effects of intergenerational transfers on elderly co-residence with adult children: Evidence from rural India", IZA Discussion papers 2847.

Pal, S. and R. Palacios (2011). "Understanding poverty among the elderly in India: Implications for social pension policy", Journal of Development Studies Vol. 47(7), pp. 1017-1037.

Palacios, R. and O. Sluchynsky (2006). "Social pensions part I: Their role in the overall pension system", World Bank, Social protection discussion paper no. 601.

Palacios, R. and R. Sane (2013). "Learning from the early experience of India's matching defined contribution scheme", in: "Matching contributions – A review of international experience", World Bank.

Pallares-Miralles, M., C. Romero and E. Whitehouse (2012). "International patterns of pension provision II – A worldwide overview of facts and figures", World Bank, Social protection and labor discussion paper no. 1211.

Park, C. (2003). "Inter-household transfers between relatives in Indonesia: Determinants and motives", Economic Development and Cultural Change Vol. 51(4), pp.929-944.

Ponczek, V. (2011). "Income and bargaining effects on education and health in Brazil", Journal of Development Economics Vol. 94(2), pp. 242-253.

Priebe, J. and F. Howell. (2014). "Fighting Old-Age Poverty: ASLUT's Role", TNP2K Working Paper 08-2014. Tim Nasional Percepatan Penanggulangan Kemiskinan (TNP2K). Jakarta, Indonesia.

Rammohan, A. and E. Magnani (2012). "Modelling the influence of caring for the elderly on migration: Estimates and evidence from Indonesia", Bulletin of Indonesian Economic Studies Vol. 48(3), pp. 399-420.

Raut, L.K. and L.H. Tran (2005). "Parental human capital investment and old-age transfers from children: Is it a loan contract or reciprocity for Indonesian families?" Journal of Development Economics Vol. 77(2), pp. 389-414.

Ravallion, M. and D. van de Walle (1991). "Urban-rural costs of living differentials in a developing economy", Journal of Urban Economics Vol. 29(1), pp. 113-127.

Ravallion, M. and B. Bidani (1994). "How robust is a poverty profile?", World Bank Economic Review Vol. 8(1), pp. 75-102.

Ravallion, M. (1998). "Poverty lines in theory and practice", World Bank. LSMS working paper no. 133.

Ravallion, M. and M. Lokshin (2007). "Lasting impacts of Indonesia's financial crisis", Economic Development and Cultural Change Vol. 56, pp. 27-56.

Ravallion, M. (2008). "Bailing out the world's poorest", World Bank, Policy research working paper no. 4763.

Rofman, R. and M.L. Oliveri (2012). "Pension coverage in Latin America – Trends and determinants", World Bank, Social protection and labor discussion paper no. 1217.

Rudkin, L. (1993). "Gender differences in economic well-being among elderly of Java", Demography Vol. 30(2), pp. 209-226.

SMERU (2012). "A rapid appraisal of the 2011 data collection for social protection programs – PPLS 2011", SMERU research report.

Sparrow, R., E. van de Poel, G. Hadiwidjaja, A. Yumna, N. Warda and A. Suryahadi (2012). "Financial consequences if ill health and informal coping mechanism in Indonesia", SMERU working paper.

Whitehouse, A. (2000). "How poor are the old? – Survey evidence from 44 countries", World Bank, Social Protection Discussion Paper No. 17.

Whitehouse, A. (2009). "Pensions at a glance: Asia/Pacific" OECD working paper.

Wiener, M. (2013). "Thailand's matching defined contribution programs for the informal sector", in: "Matching contributions – A review of international experience", World Bank.

Willmore, L. (2007). "Universal pensions for developing countries", World Development Vol. 35(1), pp. 24-51.

WB (1994). "Averting the old-age crisis", World Bank. New York: Oxford University Press.

WB (2006). "Making the New Indonesia work for the poor", World Bank.

WB (2009). “Closing the coverage gap – The role of social pensions and other retirement income transfers”, World Bank, Edts: R. Holzmann, D.A. Robalino and N. Takayama.

WB (2012a). “Protecting poor and vulnerable households“, World Bank.

WB (2012b). “Targeting poor and vulnerable households in Indonesia“, World Bank.

WB (2012c). “JSLU, JSPACA, PKSA – Cash and in-kind transfers for at-risk youth, the disabled and vulnerable elderly”, World Bank.

WB (2012d). “Policy note on SJSN”, World Bank.

WB (2013a). “Matching contributions – A review of international experience”, World Bank.

WB (2013b). “Nonfinancial defined contributions pension schemes in a changing pension world”, World Bank.

WB (2013c). "Reducing elderly poverty in Thailand - The role of Thailand's pension and social assistance programs”, World Bank.

Appendix

Table A1: Provincial poverty rates in Indonesia (March 2012)

	Poverty rates (%)				
Province	Total	60+	65+	70+	75+
Aceh	19.46	13.72	13.13	10.36	12.81
Sumatera Utara	10.67	8.48	6.75	4.97	5.41
Sumatera Barat	8.19	6.08	5.92	4.64	4.39
Riau	8.22	5.53	5.81	7.30	5.32
Jambi	8.42	12.58	12.74	13.09	14.32
Sumatera Selatan	13.78	12.31	11.69	13.41	11.17
Bengkulu	17.70	14.95	10.89	9.99	6.94
Lampung	16.18	16.09	17.33	20.68	21.91
Kepulauan Bangka Belitung	5.53	5.37	5.87	8.04	5.87
Kepulauan Riau	7.11	8.28	11.29	16.53	16.12
DKI Jakarta	3.69	3.24	3.39	4.25	5.26
Jawa Barat	10.09	10.09	12.54	14.3	13.74
Jawa Tengah	15.34	17.45	18.98	19.71	22.23
DI Yogyakarta	16.05	20.00	23.00	22.93	22.15
Jawa Timur	13.40	15.81	16.69	17.35	17.50
Banten	5.85	6.03	6.36	5.87	5.86
Bali	4.18	3.48	3.61	3.70	4.43
Nusa Tenggara Barat	18.63	17.47	17.98	19.99	25.24
Nusa Tenggara Timur	20.88	15.25	15.50	18.05	16.88
Kalimantan Barat	8.17	6.90	6.35	7.49	8.19
Kalimantan Tengah	6.51	4.62	6.03	3.75	5.00
Kalimantan Selatan	5.06	3.45	3.87	4.35	2.31
Kalimantan Timur	6.68	2.72	3.73	5.26	8.18
Sulawesi Utara	8.18	6.20	7.08	9.33	5.99
Sulawesi Tengah	15.40	6.07	7.12	6.03	5.56
Sulawesi Selatan	10.11	9.09	10.54	11.70	12.17
Sulawesi Tenggara	13.71	13.76	16.36	15.20	14.59
Gorontalo	17.33	13.53	13.80	18.72	20.42
Sulawesi Barat	13.24	7.97	8.79	9.83	9.20
Maluku	21.78	18.31	19.29	20.34	17.04
Maluku Utara	8.47	2.81	2.56	2.81	5.53
Papua Barat	28.20	12.15	9.64	13.07	8.91
Papua	31.11	22.61	20.68	31.09	36.60

Note: Calculations by TNP2K based on Susenas 2012 round (March). Official BPS poverty lines (rural/urban province level) applied. Poverty rates refer to individuals.

Table A2: Laws, treaties and decrees related to old-age poverty

Title	Ratified / Signed	Content
Constitution	1945, 1949, 1959	Fulfilment of basic needs is guaranteed explicitly mentioning the elderly.
Law no. 4	1965	Specifies the provision of social assistance to disadvantaged older persons; Target are the elderly who are unable to work for livelihood and whose life depends on the help of others.
Law no. 13	1998	Law on Welfare of elderly people; Elderly who don't have the potential to become largely independent should be given social assistance.
Law no. 40	2004	SJSN Law, Social security contributions for the poor in retirement schemes will be paid by the government.
Government Regulation no. 43	2004	Efforts to improve the social welfare of elderly people.
Presidential decree no. 52	2004	Establishment of the National Commission for Older Persons.
Regulation of the MoF no. 20	2006	Cash disbursement to vulnerable elderly.
Law no. 11	2009	Law on social welfare; regulatory framework for social protection to elderly.
Presidential instruction no. 3	2010	Socially just development programme.
Laws no. 19 and 24	2011	Ratification of the UN convention on the rights of people with disabilities; social security administrative bodies/providers.
Social Protection Floor Strategy	2012	Bappenas; Aims at social protection policies for all elderly and social assistance to poor elderly
MP3KI	2013	Bappenas; Specifies that social assistance should be given to every poor elderly
ASEAN Vision 2020	1997	Guarantee of human rights and fundamental freedoms to the elderly
ASEAN Charter	2008	Safeguard the rights, provide equal opportunities and increase the welfare of the elderly
ASEAN Socio-cultural Community Blueprint	2009	Support activities in developing care, welfare and quality of life of the elderly
ASEAN Human Rights declaration	2012	Guarantee of human rights and fundamental freedoms to the elderly
ASEAN Strategic Framework on Social Welfare and Development (Plan of Action)	2012	Income support for elderly and promotion of active and healthy aging

Table A3.1: Types of mandatory systems for retirement income (Asia)

Country	Flat-rate	Earnings-related	Means tested	Flat rate universal	Provident funds	Occupational retirement schemes	Individual retirement schemes	Statutory pensionable age	
								Men	Women
Armenia	X a		X					63	62.5
Australia			X			X		65	64
Azerbaijan	X a	X a	X					62.5	57.5
Bahrain		X						60	55
Bangladesh			X					65	65
Brunei	X			X	X			60	60
Burma (Myanmar)	b							e	e
China	X a						X	60	60
Fiji					X			55	55
Georgia	X a		X					65	60
Hong Kong			X	X		X		65	65
India		X	X		X			58	58
Indonesia					X			55	55
Iran		X						60	55
Israel	X		X					67	62
Japan	X	X						65	65
Jordan		X						60	55
Kazakhstan		X	X				X	63	58
Kiribati					X			50	50
Kuwait		X						50	50
Kyrgyzstan		X	X				X	63	58
Laos		X						60	60
Lebanon		X						64	64
Malaysia					X			55	55
Marshall Islands		X						60	60
Micronesia		X						65	65
Nepal				X	X			58	58
New Zealand			X	X				65	65
Oman		X						60	55
Pakistan		X						60	55
Palau		X						60	60
Papua New Guinea						X		55	55
Philippines	X a							60	60
Samoa				X	X			55	55
Saudi Arabia		X						60	55
Singapore					X			55	55

Country	Flat-rate	Earnings-related	Means tested	Flat rate universal	Provident funds	Occupational retirement schemes	Individual retirement schemes	Statutory pensionable age	
								Men	Women
Solomon Islands					X			50	50
South Korea		X	X					60	60
Sri Lanka					X			55	50
Syria		X						60	55
Taiwan	X a	X					X	60	60
Thailand		X						55	55
Turkey		X						60	58
Turkmenistan		X	X					62	57
Uzbekistan		X	X					60	55
Vanuatu					X			55	55
Vietnam		X						60	55
Yemen		X						60	55

Source: "Social Security Programs throughout the World" database; Access: January 2013

Table A3.2: Types of mandatory systems for retirement income (Africa)

Country	Flat rate	Earn-ings-related	Means tested	Flat rate univer-sal	Prov-ident funds	Occupa-tional retire-ment schemes	Individ-ual retire-ment schemes	Statutory pensionable age	
								Men	Women
Algeria		X						60	55
Benin		X						60	60
Botswana				X				65	65
Burkina Faso		X						56d	56d
Burundi		X						60	60
Cameroon		X						60	60
Cape Verde		X						65	60
Central African Republic		X						60	60
Chad		X						60	60
Congo (Brazzaville)		X						60	60
Congo (Kinshasa)		X						65	60
Côte d'Ivoire		X						55	55
Egypt		X a						60	60
Equatorial Guinea		X						60	60
Ethiopia		X						60	60
Gabon		X						55	55
Gambia		X			X			60	60
Ghana		X				X		60	60
Guinea		X						55	55
Kenya					X			60	60
Liberia		X	X					60	60
Libya		X						65	60
Madagascar		X						60	55
Malawi		b						f	f
Mali		X						58	58
Mauritania		X						60	55
Mauritius		X		X c				60	60
Morocco		X						60	60
Niger		X						60	60
Nigeria							X	50	50
Rwanda		X						55	55
São Tomé and Principe		X						62	57
Senegal		X						55	55
Seychelles		X		X				63	63

Country	Flat rate	Earn-ings-related	Means tested	Flat rate univer-sal	Prov-ident funds	Occupa-tional retire-ment schemes	Individ-ual retire-ment schemes	Statutory pensionable age	
								Men	Women
Sierra Leone		X						60	60
South Africa			X					60	60
Sudan		X						60	60
Swaziland			X		X			50	50
Tanzania		X						60	60
Togo		X						60	60
Tunisia		X						60	60
Uganda					X			55	55
Zambia		X						55	55
Zimbabwe		X						60	60

Source: "Social Security Programs throughout the World" database; Access: January 2013

Table A3.3: Types of mandatory systems for retirement income (Latin America)

Country	Flat rate	Earn-ings-related	Means tested	Flat rate univer-sal	Prov-ident funds	Occupa-tional retire-ment schemes	Individual retire-ment schemes	Statutory pensionable age	
								Men	Women
Antigua and Barbuda		X	X					60	60
Argentina	X	X	X					65	60
Bahamas		X	X					65	65
Barbados		X	X					66	66
Belize		X	X					65	65
Bermuda	X b		X			X		65	65
Bolivia			X	X			X	58	58
Brazil		X	X					65 d	60 d
British Virgin Islands		X						65	65
Canada		X	X	X c				65	65
Chile		X d	X				X e	65	60
Colombia		X					X e	60	55
Costa Rica		X	X				X	65	65
Cuba		X	X					65	60
Dominica		X						60	60
Dominican Republic		X	X				X	60	60
Ecuador		X	X f				X	60	60
El Salvador		X d					X e	60	55
Grenada		X						60	60
Guatemala		X						60	60
Guyana		X						60	60
Haiti		X						55	55
Honduras		X						65	60
Jamaica	X g	X g						65	60
Mexico		X d					X e	65	65
Nicaragua		X	X					60	60
Panama		X					X	62	57
Paraguay		X						60	60
Peru		X					X e	65	65
Saint Kitts and Nevis		X	X					62	62
Saint Lucia		X						63	63
Saint Vincent and the Grenadines		X						60	60

Country	Flat rate	Earn-ings-related	Means tested	Flat rate univer-sal	Prov-ident funds	Occupa-tional retire-ment schemes	Individual retire-ment schemes	Statutory pensionable age	
								Men	Women
Trinidad and Tobago		X	X					60	60
United States		X	X					66	66
Uruguay		X	X				X	60	60
Venezuela	X g	X g						60	55

Source: "Social Security Programs throughout the World" database; Access: January 2013

Table A4: "Zero-Pillar schemes"

Country	"Zero Pillar"	Age	Monthly benefit level	
			US$	US$ PPP
Asia				
Bangladesh	means tested		4	10
Brunei Darussalam	universal	60	201	268
Hong Kong	means tested		140	197
India	means tested	60	4	10
Indonesia	means tested		33	42
Korea, Republic of	means tested	65	80	115
Malaysia	means tested	60	94	163
Maldives	pensions tested	65	131	195
Mauritius	universal	60	109	187
Mongolia	means tested		26	65
Nepal	pensions tested	70	6	15
Papua New Guinea	universal	60	14	16
Philippines	means tested		12	20
Seychelles	universal	63	173	433
Thailand	pensions tested	60	19	34
Timor-Leste	universal	60	20	58
Viet Nam	means tested	60	6	14
Viet Nam	pensions tested	80	9	21
Latin America				
Antigua and Barbuda	means tested	77	94	131
Argentina	means tested	70	122	210
Bahamas	pensions tested	65	245	316
Barbados	pensions tested		299	421
Belize	means tested		51	95
Bermuda	pensions tested	65	451	
Bolivia	universal	60	29	60
Brazil	means tested		331	331
Brazil	means tested	65	331	331
Cape Verde	means tested	60	60	69
Chile	means tested	65	158	196
Colombia	means tested		34	45
Costa Rica	means tested	65	141	190
Dominican Republic	means tested	60	79	133
Ecuador	means tested	65	35	74
El Salvador	means tested	70	50	102
Guatemala	means tested	65	51	81
Guyana	universal	65	50	114
Jamaica	means tested	60	11	23
Panama	pensions tested	70	100	166
Paraguay	means tested	65	87	139
Peru	pensions tested	65	47	78
Saint Vincent and the Grenadines	pensions tested		60	112
Suriname	universal	60	154	251
Trinidad and Tobago	means tested	65	472	594
Uruguay	means tested	70	241	297
Venezuela, Bolivarian Republic of	means tested		360	427

Note: HelpAge International database, Accessed: November 2012.

Indonesia in 2013 was an ageing society with an elderly population (60+) of approximately 18 million or eight percent of the total population. Due to continuously low fertility levels, lower mortality and higher life expectancy rates, the number of elderly in the country is predicted to increase to more than 80 million individuals by 2050 who will by then constitute about 25 percent of the total population.

Considering the rise in its elderly population and the low pension coverage, the Indonesian government has shown strong commitment towards raising the number of elderly who have access to formal pensions. In line with a variety of social welfare laws, the National Security Law (SJSN), declarations under ASEAN and commitments to a comprehensive social protection floor policy, Indonesia has endorsed a multi-pillar approach to providing income support in old age. However, the current reforms associated with the SJSN Law aim only at providing income support to the future elderly generation - those working age adults that will retire in 15-40 years. While the success of these reforms needs to be demonstrated, there remains substantial scope to address the need for pension coverage among the current elderly population.

Old-Age Poverty in Indonesia: Empirical Evidence and Policy Options – A Role for Social Pensions aims at filling several evidence gaps in the discussion on elderly and old-age poverty in Indonesia. Firstly, it provides a detailed and comprehensive picture of the socioeconomic circumstances of the current elderly generation. By doing so it provides Indonesia's first nationally representative poverty assessment on the elderly addressing aspects of education, health and remittances as well as poverty measurement. Second, the paper outlines Indonesia's legal, political and program commitments to alleviate old-age poverty and contrasts it with recent international experience on pension reform. This paper discusses in particular the benefits of social pensions for Indonesia's elderly, and outlines the pros-and cons of poverty-targeted and universal pension schemes. Finally, the paper provides ex-ante simulation results on the poverty and fiscal impacts for selected social pension schemes.

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